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Andrews University

School of Education

**THE IMPACT ON TEAM EFFECTIVENESS OF PERSONALITY
PREFERENCES OF TEAM MEMBERS INVOLVED IN THE
CONNECTICUT EARLY INTERVENTION PROJECT**

A Dissertation

Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Nancy Krafcik-Rousseau

June 2001

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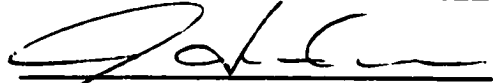
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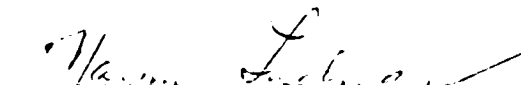
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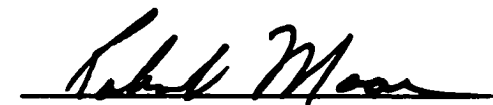
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Date approved

For Henry, Michael, Elizabeth, Kenny, and David

**Thank you for all the joy and love, and for
the continued support to allow me to
live my life to the fullest**

ABSTRACT

**THE IMPACT ON TEAM EFFECTIVENESS OF PERSONALITY
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by

Nancy Krafcik-Rousseau

Chair: James A. Tucker

ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

Andrews University

School of Education

**Title: THE IMPACT ON TEAM EFFECTIVENESS OF PERSONALITY
PREFERENCES OF TEAM MEMBERS INVOLVED IN THE CONNECTICUT
EARLY INTERVENTION PROJECT**

Name of researcher: Nancy Krafcik-Rousseau

Name and degree of faculty chair: James A. Tucker, Ph.D.

Date Completed: August 2001

Problem

Educators are faced with significant challenges daily as they attempt to meet the diverse needs of students. The establishment of school-based problem solving teams is one approach that supports teachers and students. This study will determine if personality preferences of team members impact the effectiveness of teams involved in the Connecticut Early Intervention Project (EIP). EIP incorporates a team approach providing assistance to requesting classroom teachers who have students experiencing difficulties.

Method

The research design consisted of a comparison of two groups of Connecticut public schools that participated in the Early Intervention Project (EIP) and were trained accordingly. Schools that had 12% or less of their student population identified as special education were classified as successful EIP schools. Schools that had more than 12% of their student population identified as special education were classified as non-successful EIP schools. The dependent variables in this study consisted of the eight interval scales on the Myers Briggs Type Indicator (MBTI). Data were statistically analyzed by including Independent Sample t-tests at the .05 level of significance. Chi Square analysis was conducted on the 93 MBTI items and tested at the probability level of .05. A total of 173 team members from 26 schools were part of the database.

Results

The results showed that the difference in the means between both groups, based on the 8 interval scales of the Myers Briggs Type Indicator (MBTI), is not statistically significant. No difference in the personality type preferences of successful and non-successful EIP trained schools was found.

Conclusions

The results of this study do not support the hypothesis that personality factors influence the effectiveness of EIP teams with respect to the determination of eligibility of students for special education. The study concludes that regardless of a team member's personality preferences, there is a need to appreciate the diversity and skills that all team members contribute to the team's functioning.

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CHAPTER I

INTRODUCTION

Overview and Background to The Problem

Educators face significant challenges as they attempt to meet the needs of a growing group of diverse learners (Phillips, McCullough, Nelson, & Walker, 1992). As a result, educators' knowledge of curricular and instructional strategies must address this diversity represented in classrooms throughout the country (Whitten & Dieker, 1995).

Educators often seek collegial support to identify instructional methods to accommodate student needs, and this has been a catalyst for approaches such as school-based intervention teams (Bahr, 1994; Bahr, Whitten, & Dieker, 1995; Phillips, McCullough, Nelson, Walker, 1992). School-based intervention teams and mainstream-assistance teams work with teachers to try to meet the complex needs of students at risk (Fuchs, Fuchs, & Bahr, 1990). In this regard, never has the need for team-based collaboration between educational professionals and community-agency personnel been greater (Safran & Safran, 1992). In 1986 it was reported that 20-30% of the students in American classrooms were experiencing difficulty in school (Will, 1986). Currently, studies supported by the National Institute of Child Health and Human Development show that at least 20-30% of American students can't read well enough to complete school assignments (Hessler, 2001; Lyon, 1995; 1997; 1998). A few remedial reading

and writing services are available in regular education programs and these services are usually sought by educators through special education (Hessler, 2001). The disproportionate number of special-education referrals and placements and the need to provide support to those students experiencing difficulty in the classroom warrants the creation of building-level, collaborative, problem-solving structures. Building-level administrators must be empowered to establish appropriate services to provide support to students based on individual need rather than eligibility for special programs (Will, 1986).

“Teachers’ jobs are more complex than ever before. They must respond to the needs of a diverse and changing student population, rapidly changing technology in the workplace, and demands for excellence from all segments of society”(Fullan, 1993, p. 5). Fullan and Hargreaves (1996) identify the following as a problem that currently exists in our schools. “There is simply not enough opportunity and not enough encouragement for teachers to work together, learn from each other, and improve their expertise as a community” (p. 1).

A variety of team structures and collaborative configurations exist in schools today. There are school-based, problem-solving teams that have resulted because of the special-education movement and the consultation arena. Various collaborative/teaming structures have occurred recently to give teachers an opportunity to work together, share information, and collaborate - structures such as grade-level teams and teams within the middle schools (Valentine & Whitaker 1997). As budgets become tighter and needs continue to grow, it is essential to demonstrate that this “strategy” for deploying teachers is having a positive effect on student achievement and student welfare (Rottier, 2000).

School districts cannot afford the luxury of providing time for a group of teachers to meet unless the team is used effectively and efficiently (Rottier, 2000).

Effectiveness of School-based, Problem-Solving Teams

The review of the professional literature examining studies that define “effectiveness” of teams can be categorized using the following measures: (1) reduction of the rate of referral to special education and the increase of appropriate referrals to special education; (2) academic or performance of the students being served; and (3) teacher or consumer satisfaction with the process and functioning of the team.

Numerous studies have determined the effectiveness of school-based teams and/or prereferral approaches as measured by the reduction of referral rates to special education (Aksamit & Rankin, 1993; Brown, Gable, Hendrickson, & Algozzine, 1991; Chalfant & Pysh, 1989; Fuchs, Fuchs, & Bahr, 1990; Graden, Casey, & Christenson, 1985; Gutkin, Henning-Stout, & Piersal, 1988; Kirner, 2000; Kruger, Stuzziero, Watts, & Vacca, 1995; Scrag & Henderson, 1996; Whitten & Dieker, 1995). However, empirically based claims regarding teaming efforts in terms of student outcomes cannot be made (Welch, Brownell, & Sheridan, 1999). Currently, most of the existing team literature focuses primarily on teacher satisfaction or changes in teacher attitudes (Welch, Brownell, & Sheridan, 1999).

Kovaleski, Gickling, Morrow, and Swank (1999) examined the academic performance of students affected by a statewide Instructional Support Team (IST) process established by the state of Pennsylvania. This study demonstrated that, overall, high implementation of the features of the ISTs was necessary for improved student performance. One of the components of a high implementing, instructional-support team

was the support of an instructional-support teacher. This model consists of a school-based, problem-solving team approach with direct support for the classroom teacher.

While the Kovalski, Gickling, Morrow, and Swank (1999) study focused on student achievement, it was noted that basic collaborative team structures (e.g., broad faculty membership, group norms and procedures, interpersonal communication skills, effective meeting logistics) needed to be in place for teams to function well. In order for teams to be effective, they must learn how best to use their group efforts given the goals they have set for themselves (Flowers, Mertens, & Mulhall, 2000). Few educators are trained or prepared to understand the relationship interactions that most affect a group's effectiveness.

Dysfunctional teams often lack skills in group decision making, problem solving and conflict management (Rottier, 2000). If we know that an effective team needs to have constructive interpersonal relationships to communicate effectively to solve problems, make decisions, and resolve conflict, then we should be able to predict which personality characteristics would enhance a school-based problem-solving team.

School improvement and student achievement will be supported by the empowerment and collegiality of staff. The second wave of the restructuring movement has concentrated not just on redesigning curriculum and instruction but on realigning roles and relationships to unleash teachers' energy and influence and enhance their professional cooperation and support to each other (Evans, 1996, p. 229). Tools and information that enhance the collegial interactions and team effectiveness will add to the current research on school-based problem-solving teams.

Prereferral Interventions

The research supports the need for building-based teams designed to problem-solve and support teachers and students experiencing difficulties in classrooms. As reported by Aksamit and Rankin (1993), studies of special-education services have raised questions and concerns about referral, evaluation, and placement practices (Adelman & Taylor, 1983; Algozzine, Christenson, & Ysseldyke, 1982; Graden, Casey, & Christenson, 1985; Sarason & Doris, 1979; Thurlow & Ysseldyke, 1982; Ysseldyke, Algozzine, Richey, & Graden, 1982). The Aksamit and Rankin (1993) article indicates that there is a need to provide general and special-education teachers with educationally relevant information along with the desire to improve full integration services for all students. One such strategy is the implementation of prereferral processes requiring team problem solving and the use of interventions in general-education classrooms prior to special-education referral (Aksamit & Rankin, 1993).

Prereferral intervention is supported by a majority of the state educational agencies (Carter & Sugai, 1989). The definitions of the types of prereferral supports and interventions vary but the broader definition can be defined as a systematic effort to assist classroom teachers in the education of students experiencing difficulty in school (Pugach & Johnson, 1989). These approaches generally involve school personnel in a problem-solving process, working together to design, develop, implement, and support the classroom teacher (Nelson, Smith, Taylor, Dodd, & Reavis, 1992). While there is a significant research base to describe the various supports in place prior to the referral to special education, there is not a large base of evidence to support the effectiveness of these approaches. Most state educational agencies support and advocate prereferral

intervention structures; therefore, research efforts should concentrate on evaluating the effectiveness of prereferral systems (Carter & Sugai, 1989).

Much of the research base regarding the effectiveness of prereferral strategies has focused around the inappropriate referrals to special education and the identification of students for special education (Brown, Gable, Hendrickson, & Algozzine, 1991; Chalfant & Pysh, 1989; Graden, Casey, & Christenson, 1985; Kirner, 2000; Kruger, Struzziero, Watts, & Vacca, 1995; Safran & Safran, 1996; Schrag & Henderson, 1996). Several studies also looked at the effectiveness of teaching strategies, interventions, and skill enhancement of teachers (Brown, Gable, Hendrickson, & Algozzine, 1991; Chalfant & Pysh, 1989; Cosden & Semmel, 1992; Graden, 1989; Graden, Casey, & Christenson, 1985; Pugach & Johnson, 1989; Schrag & Henderson, 1996; Sindelar, Griffin, Smith, & Watanabe, 1992; Wood, Lazzari, Holcomb Davis, Sugai, & Carter, 1990).

Effectiveness of prereferral approaches, such as building-based, problem-solving structures can be easily measured by the reduction of referrals and/or placements to special education. However, team satisfaction and effectiveness of team functioning is more difficult to measure. Many studies have addressed team satisfaction, effective team functioning, and teacher morale (Abelson & Woodman, 1983; Aksamit & Rankin, 1993; Bay, Bryan, & O'Connor, 1994; Chalfant & Pysh, 1989; Cosden & Semmel, 1992; Fimian, 1986; Fleming & Fleming, 1983; Harrington & Gibson, 1986; Hayek, 1987; Kovalski, Tucker, & Duffy, 1995; Kruger, Struzziero, Watts, & Vacca, 1995; Safran & Safran, 1996).

The following are major themes that have been extracted from the literature that represent critical components for team effectiveness and team satisfaction.

1. Strong administrative support from building principals (Cosden & Semmel, 1992; Chalfant & Pysh, 1989).
2. Efficient use of time and effectiveness of team meetings (Cosden & Semmel, 1992; Chalfant & Pysh, 1989).
3. Systematic process for the collection of data to define problems in measurable terms, develop action plans, and monitoring progress (Bahr, Whitten, Dieker, Kocarek, & Mason, 1999; Cosden & Semmel, 1992).

Training and networking with other teams and colleagues (Chalfant & Pysh, 1989; Cosden & Semmel, 1992) and providing skills for individuals to work within groups (Fleming & Fleming, 1983) is essential for the development of effective teams. Collaborative consultation allows for people with diverse expertise to generate or solutions that may not be generated, from individual team members (West & Cannon, 1988). Training for individual team members around group-process skills contributes to effective team functioning (Fleming & Fleming, 1983). There is a need for the literature to provide a clear picture of the entire process of development, implementation, and evaluation of educational partnerships such as school-based teams (Welch, Brownell, & Sheridan, 1999).

Connecticut's Early Intervention Model

In 1985, Connecticut's Early Intervention Project (EIP) began as an approach and alternative support to students in the general-education classroom who were experiencing learning or behavior difficulties in schools. The purpose of the project was to assist schools in the establishment of a building-based, problem-solving support team to provide support to teachers who have students experiencing difficulties in the classroom.

The skills and competencies that are part of the training and technical assistance of the Early Intervention Project include:

1. *Collaborative/Consultation skills.* Effective collaboration/consultation skills are necessary to develop an effective team process. EIP teams are comprised primarily of regular-education teachers and an active building administrator. The training and technical assistance provide teams with the skills and knowledge to effectively problem solve and support teachers who have students experiencing academic or behavioral difficulties.

2. *Systematic problem-solving approach.* EIP teams are trained to dialogue and discuss students within a problem-solving framework that includes the collection of data that is curriculum driven to assist in the defining of objectives, brainstorming strategies, developing action plans, and monitoring results.

EIP moves away from an "expert" model of problem solving to one that focuses on the role of classroom teachers as the "experts" and utilizes the strength of the team to develop appropriate strategies (Kirner, 2000; Connecticut State Department of Education, 1992). Kirner (2000) analyzed the change in special-education prevalence rates in Connecticut schools participating in the (EIP). Special-education prevalence rates can be defined as the percentage of students in a given population determined to be eligible for special education and related services. Kirner found that significant differences exist between the special-education prevalence-change rates in EIP schools and non-EIP schools and that the EIP training and technical assistance model does hold practical significance for Connecticut schools that have established this collaborative or prereferral approach.

Problem Statement

“Teachers’ jobs are more complex than ever before. They must respond to the needs of a diverse and changing student population, a rapidly changing technology in the workplace, and demands for excellence from all segments of society” (Fullan, 1993, p. 5). There is recognition that teachers cannot do this alone (Fullan, 1993). The following are five themes that have been identified previously that support the problem statement and provide credence for the purpose of this study:

1. *Collaboration*-educators need to work collaboratively to meet the diverse needs of students. “The ability to collaborate—on both a small and large scale is becoming one of the core requisites of postmodern society”(Fullan, 1993, p. 17). Change and school-reform efforts are promoting the transforming of schools into learning organizations and creating collaborative, problem-solving environments where educators can work together as team members (Hargreaves, 1995; Kovalski, Gickling, Morrow, & Swank, 1999; O’Neil, 1995; Senge, 1990). There is a need to look at how school-based teams can use their time to problem solve more effectively regarding the curriculum and the needs of students. A recently published study on middle-grade teams showed that students gain both academically and affectively when teams are functioning well (Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997).

2. *Effective Relationships*-dysfunctional teams often lack skills in group decision making, problem solving, and conflict management (Rottier, 2000). What is critical here is identifying the variables and type of approaches that are the most effective. Information on what makes teams function effectively helps to create a common language and a common approach that will encourage collaboration and problem solving

to increase student success. If we know that teams need to have constructive interpersonal relationships to communicate effectively, to problem solve, and to make decisions, then we should be able to determine if personality characteristics affect the effectiveness of school-based, problem-solving teams.

3. *Diversity of team membership*-a diverse membership on problem-solving teams can enhance the team effort when problem solving around the needs of a student experiencing difficulties in class. The inclusion and involvement of critical players such as the general-education teacher is very important (Aksamit & Rankin, 1993).

4. *Skills and competencies*-specific skills and competencies can help educators become more effective as team members. Few educators are trained or prepared to understand the relationship and interactions that affect team effectiveness (Flowers, Mertens, & Mulhall, 2000). Training for individual team members around group-process skills will contribute to team effectiveness (Fleming & Fleming, 1983).

5. *Referrals to special education*. Hessler reported data from the National Institute of Child Health and Human Development (NICHD: National Institutes of Health, Bethesda, Maryland) which showed that at least 20-30 % of American students cannot read well enough to complete schoolwork (Lyon, 1995, 1997, 1998). Usually the only remedial services available are those provided by special education; so students are often diagnosed as LD so they can access the resources (Hessler, 2001). Teachers refer students to intervention teams and/or related-services personnel because they want instructionally relevant information and helpful strategies (Ysseldyke, Christenson, & Kovalski, 1994). School-based teams have an impact on the referral and identification

process for special education (Chalfant & Pysh, 1989; Graden, Casey, & Bonstrom, 1985; Lilly & Givens-Ogle, 1981; Ritter, 1978; Talley, 1988; Tucker, 2001).

Purpose of This Study

This study is to compare two groups of trained EIP teams to determine if personality preferences affect the success of the team. The teams are classified as successful or unsuccessful based on the special-education prevalence rate of their site. For purposes of this study, schools that had 12% or less of their student population identified as special education were classified as successful EIP schools; those with more than 12% were classified as non-successful EIP schools. States must serve all eligible children with disabilities, and a proportion of the funds needed is provided by the federal government, but that funding is limited to supporting only 12% of the general-education population (Chaikind, Danielson, & Brauen, 1993; U.S. Department of Education, 1997). Given this official cut off, 12% was used in the study as the criteria for differentiating between successful and non-successful schools.

One of the goals of the Early Intervention Project is to reduce the referral rates for special-education evaluation and to increase the appropriateness of the referrals to special education. This study compared trained EIP teams to determine if personality preferences of the team members affect the success of the team, the team's impact on referral rates, and the eventual identification of special-education students. The study also analyzed personality preferences and styles to see if they affected the application of skills and competencies that are part of the EIP process.

The EIP teams are made up of teachers and support staff who assist other teachers in the development of strategies and interventions for students experiencing difficulties in

the classroom. Interpersonal, collaborative skills and problem-solving skills are essential to being an effective team member. This study focused on the individual preferences and approaches to problem solving, as they affect meeting the needs of students experiencing difficulties in schools, by teams trained in the problem-solving process used by the Connecticut Early Intervention Project.

The Myers Briggs Type Indicator (MBTI) is used as an instrument to determine personality characteristics of individuals. The instrument has an extensive research base and history, which is documented in later chapters. The MBTI provides information about personality preferences of individuals when approaching a task, learning new information, making decisions, interacting with others, and organizing daily activities. The information that is extracted from the analysis of the MBTI provides critical information on how relationships can be strengthened and enhanced.

Research Questions

The following questions prompted the research questions: Do certain TYPE preferences respond more successfully to the essential characteristics of the Early Intervention Model? How has TYPE preference affected the application of the skills and competencies of the Early Intervention Model on the special education prevalence rates for EIP trained schools?

The following research hypotheses are addressed:

1. There is a significant difference in the personality-type preference of successful EIP team members versus unsuccessful EIP team members.
2. There is a significant difference in the Extraversion/Introversion characteristics of successful EIP team members versus unsuccessful EIP team members;

3. There is a significant difference in the Sensing Perception/Intuition perception characteristics of the successful EIP team members versus unsuccessful EIP team members;

4. There is a significant difference in the Thinking/Feeling judgment characteristics of the successful EIP team member versus unsuccessful EIP team member;

5. There is a significant difference in the Judgment/Perception characteristics of the successful EIP team member versus unsuccessful EIP team member.

Rationale

Current educational reform and restructuring movements have concentrated not only on redesigning curriculum and instruction but on attempting to build collaborative structures to unleash the teacher's energy and influence on the success of students (Evans, 1996). A component of the restructuring movement encourages teachers to work, collaborate, and learn together (Rosenfield & Gravois, 1996). Supporting a "learning organization" (Senge, 1990) allows for continued expansion of an organization's capacity to create its future and guide its destiny. However, as budgets become tighter, it will be imperative to demonstrate that having teachers work together in teams to collaborate will have a positive effect on student achievement and student welfare (Rottier, 2000).

Implementing a building-based, problem-solving team is one strategy designed to support both students and teachers in meeting the diverse needs of students in classrooms. Aksamit and Rankin (1993) report that 23 states require prereferral interventions for students with learning and/or behavior problems and that 11 states recommend this type

of process. They also report that these states place the responsibility for establishing this process at the local level (Carter & Sugai, 1989). These school-based, problem-solving teams provide a systematic approach to assisting and supporting classroom teachers in the education of students experiencing difficulty in schools (Nelson, Smith, Taylor, Dodd, & Reavis, 1992; Pugach & Johnson, 1989). The need for developing an effective, problem-solving, collaborative process is not only important for serving children experiencing difficulty in classrooms but is essential in the restructuring of our schools.

School-based collaborative teams are becoming more widespread as teachers increasingly try to meet the complex needs of students experiencing difficulties in school (Fuchs, Fuchs, & Bahr, 1990; Safran & Safran, 1992;). The need for team-based collaboration between educational professionals and community-agencies personnel is greater now than ever before (Safran & Safran, 1992). Educators are being challenged as they try to meet the needs of a growing group of diverse learners (Phillips, McCullough, Nelson, & Walker, 1992). Educators often seek support from their colleagues to identify strategies and interventions that accommodate student needs. This need has been the catalyst for approaches such as school-based intervention teams (Algozzine & Yssledyke, 1983; Bahr, 1994; Gutkin, Henning-Stout, & Piersal, 1988; Phillips, McCullough, Nelson, & Walker, 1992). School-based intervention teams represent an approach that has potential to assist educators in meeting the diverse needs of students (Bahr, Whitten, Dieker, Kocarek, & Mason, 1999). Through studies of teacher-teacher collaboration, Pugach and Johnson (1989) have demonstrated that teachers can support each other in problem solving toward meeting individual needs (Graden, 1989). Educators are

becoming increasingly aware that there is valuable expertise when a group of teachers join together to problem solve around the needs of children.

School-based teams have an impact on the referral and identification process for special education (Chalfant, & Pysh, 1989; Graden, Casey, & Bonstrom, 1985; Lilly & Givens-Ogle, 1981; Ritter, 1978; Talley, 1988; Tucker, 2001).

There is a growing interest in collaborative, problem-solving support in schools (Cosden & Semmel, 1992). A report by the U.S. Department of Education Task Force (Will, 1986) supports the use of school-based, teacher-supported teams as one way to assist children experiencing difficulties in school. Teachers may also use building-based teams to help them analyze data and better understand classroom problems. (Chalfant & Pysh, 1989).

Teachers can work together as teams to meet the daily challenges of addressing their student's wide range of abilities, needs, and interests. Time is needed for teams to work together, and with dwindling budgets, resource teams must demonstrate that they can work effectively (Rottier, 2000). Once teams are formed, they need information that will help them work together efficiently and effectively so that their relationships will influence classroom teaching and learning (Flowers, Merens, & Mulhall, 2000).

Structures need to be established to allow teachers an opportunity to work together, learn from each other, and improve their expertise as a community (Fullan & Hargreaves, 1996). There is also a need for a greater research base to determine what makes school-based teams more effective in their ability to address the diverse learning needs of students. School-based, problem-solving teams can assist in accomplishing this need. As the knowledge base on effective team practices grows, so will the need for

professional development and preservice training to assist educators in becoming more effective in the process (Bahr, Whitten, Dieker, Kocarek, & Mason, 1999). Personality preferences as defined by the MBTI should enhance this knowledge of the diversity of approaches that team members bring to the relationship when making decisions, approaching tasks, interacting with others and organizing their life and work.

The state of Connecticut requires school districts to develop and implement prereferral interventions (Kirner, 2000). "Before a child is referred to the planning and placement team, alternative procedures and programs in regular education shall be explored and, where appropriate, implemented" (Connecticut Regulations Concerning Children Requiring Special Education, 1986, 23). The Connecticut Early Intervention Project is an established process that promotes the concept of teams and problem solving in order to meet the needs of students. With ongoing support and training from the state of Connecticut, interaction with a trained EIP teams allows us to examine the impact of personality preferences in connection with the team functioning.

There is a need to create high performing teams in schools to perform the multiple tasks and skills involved in meeting the diverse needs of students. Effective teams learn to build trust and confidence in each other's capabilities and to reinforce other's intentions and capabilities (Katzenback & Smith, 1993). Research that helps to create a database regarding how personality characteristics affect the effectiveness of problem-solving teams will contribute to the literature on school-based teams. A greater understanding of colleagues and team members can only lead to a more open and honest environment that allows effective teams to function, grow, and flourish.

There is a need to expand the research base regarding the effectiveness of school-based, problem-solving teams. Given the perceived advantages of teams, team development, and team building (Hammer & Huszczo, 1996), the focus of this study on what makes a team more effective will add to the current research literature.

Definition of Terms

Connecticut's Early Intervention Project (EIP): The Connecticut Early Intervention Project was initiated by the Connecticut State Department of Education with the following goals identified: (1) to reduce inappropriate referrals to special education; (2) to reduce the number of inappropriate referrals for formal testing and evaluation, and (3) to reduce inappropriate special-education classification of students, especially those from minority groups. The project included extensive training and technical assistance for school-based, problem-solving teams designed to support students in general-education classrooms with learning and/or behavior concerns in order to improve student achievement and reduce the inappropriate referrals to special education (Connecticut State Department of Education, 1998).

Early Intervention Project (EIP) Model: The Early Intervention Project (EIP) Model establishes building-based teams or partnerships that work together to address the diverse needs of students experiencing difficulties in regular-education classrooms. These partnerships or teams are made up primarily of classroom teachers and are trained to follow a systematic problem-solving process designed to effectively discuss and plan for students. This problem-solving process is driven by curriculum-based data, collected so that appropriate goals can be established and effective strategies can be implemented. This model's foundational components support effective collaboration, which

encompasses a systematic structure or framework to provide an effective support system for students experiencing difficulties (Connecticut State Department of Education, 1998). This model moves away from an “expert” model and supports classroom teachers collectively as the “experts”.

Prereferral Intervention: Intervention-assistance programs and prereferral teams have evolved from two primary sources. Teacher Assistance Teams and prereferral programs (Sindelar, Griffin, Smith, & Watanabe, 1992). The Teacher Assistance Team concept, which emphasized collaborative problem solving and general-education ownership, was introduced by Chalfant and colleagues (Chalfant, Pysh, & Moultrie, 1979). Prereferral-intervention programs were initiated in the early 1980s and were established as a distinct step in the eligibility process, usually under the direction of special-services personnel (Safran & Safran, 1996). The prereferral teams focused on more formalized, data-driven, behavioral consultation and were primarily made up of the support personnel in schools.

School-Based Problem-Solving Teams (SBPST): School-based, problem-solving teams (SBPST) represent one type of school-based support or partnership that consists of small groups of educators working together to solve problems using a systematic process. Variations of SBPSTs includes Teacher Assistance Teams (Chalfant, Pysh, & Moultrie, 1979), Instructional Support Teams (Gickling, Morrow, & Swank, 1999; Kovalesski, Tucker, & Duffy, 1995; Kovalesski, Tucker, & Sevens, 1996), Early Intervention Teams (Kirner, 2000; Tucker, 2001), and prereferral intervention teams (Graden, Casey, & Christenson, 1985). While the case management and team composition may differ, teams identified as SBPST have the following in common: (1) members usually participate on

this “team” in addition to other instructional responsibilities; (2) the team works with an individual by providing indirect service and developing a plan that is ultimately implemented by the person seeking assistance; (3) the team follows some type of problem solving format; and (4) the team assists the individual in evaluating the effects of the intervention (Welch, Brownell, & Sheridan 1999; Welch & Sheridan, 1995).

Special-Education Prevalence: The percentage of students in a given population who are eligible for special education and related services is calculated based on the total special-education student population divided by the total number of students in the school-age population (Kirner, 2000).

Myers Briggs Type Indicator: The Myers-Briggs Type Indicator (MBTI) is a tool to assess personality preferences. The MBTI has an extensive history and research base. Many have turned to the Myers-Briggs Type Indicator to assist in personality-inventory analysis to provide data on team effectiveness (Hammer & Huszco, 1996). Although the use of the MBTI to help understand and build teams dates back to Myers’s (1974) and McCaulley’s (1975) work with health-care teams, the instrument has found new popularity in using the MBTI with teams and organizations (Hammer & Huszco, 1996).

The Myers-Briggs Type Indicator (MBTI) is a tool to provide knowledge of individual differences that will help in identifying particular talents and gifts each team member brings to the task. This knowledge of individual preferences will help in identifying natural individual differences and how these differences affect the components of effective teams.

General Methodology

The overall research design of this study consists of a comparison of two groups of Early Intervention Project (EIP) trained schools. Each group consists of a building-based team of educators and support staff. The EIP is supported by the Connecticut State Department of Education and was initiated in 1985.

This study compares the personality characteristics of team members who serve on trained EIP teams. These two comparative groups are classified as successful EIP schools and non-successful EIP schools. This ex-post facto design identifies successful and non-successful EIP teams based on special education prevalence rates. For purposes of this study, schools that had 12% or less of their student population identified as special education were classified as *successful* EIP schools. Schools that had more than 12% of their student population identified as special education were classified as *non-successful* EIP schools.

Developing collaborative problem-solving structures within schools is critical to meeting the diverse needs of all students. The EIP team brings together a group of educators who work together to assist their colleagues to support students experiencing learning difficulties. The EIP trained teams receive formal training and technical assistance in collaborative/consultation skills, problem-solving, and the collection of curriculum-based assessments designed to drive the strategy or intervention. This study looks at personality characteristics of identified team members to determine if personality TYPE affects the application of EIP competencies and skills and to determine if personality TYPE affects the outcome of the team's success.

The independent variable is school type in the context of EIP trained schools within Connecticut-those trained in a school-based, problem-solving process as defined by the Connecticut Early Intervention Model. Within this group are two separate categories—successful and non-successful EIP teams. Success of these teams is determined by the percentage of identified special-education students.

The dependent variables in this study consist of the eight interval scales on the Myers Briggs Type Indicator (MBTI). This study looks at how the various personality TYPE preferences affects the skills and competencies taught in the EIP training and in technical assistance. The scales on the Myers Briggs Type Indicator (MBTI) are: Extraversion, Introversion, Sensing Perception, Intuition Perception, Thinking, Feeling, Judgment, and Perception.

Limitations

1. This study is limited due to the inability to access the school culture or climate information with regard to the acceptance and support of collaborative structures (i.e. school-based teams).

2. The degree to which the teams were effectively implementing the EIP “model” and utilizing a team process whereby objectives for students were established, action plans developed, and the progress of the student was monitored. The current team literature does not include empirical support for collaborative partnerships in service delivery to students such as SBPSTs (Welch, Brownell, & Sheridan, 1999). There is little evidence that SBPSTs assess how effectively they use the problem-solving procedures, which include developing a measurable objective. We cannot determine from the

literature that teams have been successful in meeting those goals and have followed the process.

3. Organizational support factors, including support from the building administrators has a strong impact on the success of SBPSTs (Kruger, Struzziero, Watts, & Vacca, 1995). This study does not identify the type of administrative support and involvement within each of the team structures.

4. This study is limited to schools in Connecticut which volunteered to participate in the initiative and receive the training and technical assistance offered through the Early Intervention Project.

5. A component of the Early Intervention Project Core Team Training focused on skills needed to be an effective team member. However, EIP team membership changes over time, and some current EIP school based team members have not formally received the Early Intervention Project Training. This study does not identify team members as receiving Early Intervention Project Core Team Training.

Delimitations

1. The EIP schools that participated in this study were selected based on their voluntary participation in the follow-up support provided by the Connecticut Early Intervention Project.

2. Prevalence rates were used as a determination of successful and unsuccessful EIP teams, with 12% being the determined dividing point between successful (12% or below) and non-successful (above 12%) teams.

Study Outline

The first chapter provides an introductory overview and rationale for this study. Chapter 2, presents the review of literature on school-based, problem-solving teams (SBPST) and the impact of various teams and structures on special-education referral and identification rates. This review also addresses the current research regarding effectiveness of these teams and identifies the need for the establishment of such structures to enhance the school-reform movement. Chapter 3 outlines the methodology of this study. The results are reported in chapter 4, and final conclusions and recommendations for further study are included in chapter 5.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

As diversity in our schools and society change, the challenges in meeting individual needs are greater, and, as a result, educators' knowledge of curricular and instructional strategies is increasing (Bahr, Whitten, Dieker, Kocarek, Mason, 1999; Phillips, McCullough, Nelson, & Walker, 1992; Whitten & Dieker, 1995). There is recognition that teachers cannot do this alone (Fullan, 1993). The expectations and demands for excellence from all segments of society as well as the technological advancements are making the teacher's job more complex than ever before. The educational literature is full of topics about school reform, renewal, restructuring, authentic learning, quality management, technology, diversity, inclusion, transition, standards, outcomes, character development, morality, and alternative schools (Kovaleski, Gickling, Morrow, & Swank, 1999).

Throughout the educational literature, two major themes appear central to meaningful change: transforming schools into learning organizations, and creating collaborative, problem-solving environments (Hargreaves, 1995; Kovaleski, Gickling, Morrow, & Swank 1999; O'Neil, 1995; Senge, 1990). Schools need to begin to

recognize the power of teams and to obtain a knowledge base about what makes teams work and function effectively. "The ability to collaborate—on both a small and large scale—is becoming one of the core requisites of postmodern society" (Fullan, 1993, p. 17). Effective teams will outperform individuals, especially when multiple skills and functions are needed. Educators have not given enough attention to the development, support, and strengthening of teams within our schools. Real and imagined rules, regulations, and arrangements prevent people from working collaboratively to problem solve around meeting the needs of the diverse learners in our schools (Kovaleski, Gickling, Morrow, & Swank, 1999). However, educators need to seek collegial support to identify strategies and methods that will accommodate the various needs of students. This need has been the catalyst for approaches such as school-based, problem-solving teams (Bahr, Whitten, Dieker, & Kocarek, & Mason, 1999; Flugum & Reschly 1994; Gutkin, Henning-Stout, & Piersal, 1988; Phillips, McCullough, Nelson, & Walker, 1992; Welch, Brownell, & Sheridan, 1999).

Change and Educational Reform Movement

The current literature identifies and defines many types of school-based problem-solving teams (SBPSTs) (Welch, Brownell, & Sheridan, 1999). Many of these structures, if implemented effectively in schools, would enhance the process of educational reform. The complexity of information is "raining down on our heads so hard that it is very difficult to understand and implement what we know about classroom and school improvement" (Fullan, Bennett, Rolheiser-Bennett, 1990, pg. 13).

"The entire educational environment is in flux, as social, economic, and political forces rapidly reshape the world of school. In the 1980's, few educators were

anticipating an explosion in the number of non-English speaking students, accelerating poverty among young children, or intensifying divisions between racial, ethnic, and religious groups”(Evans, 1996, p. 12). Changes within our schools to accommodate collaborative structures and school-based, problem-solving teams would be a powerful link to educational reform.

Fullan (1993) looks at school as a learning organization. The “learning organization” is an organization that is continually expanding its capacity to create its future (Senge, 1990). Building a “learning organization” requires a skilled leader with vision and an understanding of how to support a “learning organization.” A “learning organization” is “where people continually expand their capabilities to understand complexity, clarify, vision, and improve shared mental models” (Fullan, 1993 p. 71). Fullan (1993) acknowledges that school is not currently a “learning organization”. Schools as they are presently structured do not represent learning organizations in which interprofessional collaboration creates a place where students can flourish and succeed (Kovaleski, Gickling, Morrow, & Swank, 1999). Creating a “learning organization” requires effort and time. Schools are facing enormous challenges and cannot fix all the problems alone. Creating a “learning organization” require, alliances and partnerships with the community and others (Fullan, 1993). Teams that are effective improve instruction, develop better professional relationships, and become powerful forces in creating learning communities within schools (Martin, 1999). However, a collaborative culture cannot be implemented by creating interactive opportunities and work arrangements for staff (Evans, 1996). Change requires leadership, vision, resources, training, information, and time.

Educators need to become skilled in working in teams and learning the skills necessary to exchange ideas and respect others. Systems need to be in place to allow teachers to work with colleagues and to collaborate with one another. "There is simply not enough opportunity and not enough encouragement for teachers to work together, learn from each other, and improve their expertise as a community" (Fullan & Hargreaves, 1991, p.1). Our schools need to restructure to allow teachers and staff to work together, to share and to problem solve around issues that pertain to making children more successful in school. Reform needs to take place at the building level. Restructuring of special education and regular education must be allowed to collectively contribute skills and resources in meeting the needs of all children (Will, 1986; Reynolds, Wang, & Walberg, 1987).

School-based, problem-solving teams that are made up primarily of classroom teachers represent an approach that not only address the diverse student needs but also is aligned with the school-reform movement and the establishment of schools as "learning communities." Collaborative problem solving among school staff is an essential component in the reform of schools and will reduce the isolation that many teachers experience (Fullan, 1993; Idol, Paolucci-Whitcomb, & Nevin, 1986; Kruger, Struzziero, Watts, & Vacca, 1995).

As schools begin to develop collaborative teacher relationships and structures, one will begin to see the power of collaboration as an under utilized resource (Fullan & Hargreaves, 1996). A component of the proposed solutions emphasized in the educational reform movement is a move to more collaborative environments that is, "... school as a community: a democratic community governed by its members. an

intellectual community of life long learners, and in some cases a moral community sharing a covenant of values” (Evans, 1996 pp. 230-231). Building a team or a nucleus of committed educators in each school, individuals who are prepared to take risks inside and outside their own classrooms, can support school change and help sidestep the institutional resistance to change that reformers meet (Maeroff, 1993).

Special Education and School-based Teams

Special education has utilized teams since the passage of Public Law 94-142 in 1975. The passage of Public Law 94-142 came with procedural safeguards relative to identification, evaluation, and placement for individuals being considered for special-education services. Procedures and processes were established to meet the requirements set forth. The concept of a multidisciplinary team became part of the procedures established by special education (Bray, Coleman, & Gotts, 1981).

With the passage of Public Law 94-142 in 1975, the Education of All Handicapped Children Act, and Individuals with Disabilities Education Act (IDEA) Amendments of 1997, a free, appropriate education has become an excepted right for people with handicaps and disabilities. The widespread existence of school-based teams has come about largely because of Public Law 94-142 (Pryzwansky & Rzepski, 1983). The act set forth and established principles and guidelines for the delivery of special-education services.

The passage of Public Law 94-142 initiated the multidisciplinary-team approach, which became a vehicle for planning and coordinating the delivery of special-education services (Fleming & Fleming, 1983; Pfeiffer & Naglieri, 1983). As part of the procedural guidelines established, referrals to special education were made through this team. Some

feel that the authors of the legislation established the team to provide an additional “quality control” since a group of specialists would gather to evaluate special-education referrals (Pfeiffer & Naglieri, 1983). It is not clear what the authors of Public Law 94-142 had as to a vision for the functioning of this type of school-based team. However, the role and function of this team in a school system is clearly connected to the tasks of determining eligibility for special education. The result is that the team is isolated from other facets of the school’s responsibilities, and the contributions of this ancillary staff may be limited (Pryzwansky & Rzepski, 1983).

The special-education literature provides us with a significant research base regarding the establishment of collaborative structures and/or teams within school buildings. School-based teams are referred to by various names in the literature (Bahr, Whitten, & Dieker, Kocarek, & Mason, 1999): teacher-assistance teams (Chalfant & Pysh, 1989, Chalfant, Pysh, & Moultrie, 1979); student-assistance teams (Aksamit & Rankin, 1993; Cooley, 1993); child-study teams (Moore, Fifield, Spira, & Scarlato, 1989); peer-intervention teams (Saver & Downes, 1991); prereferral-intervention teams (Graden, Casey, & Bonstrom, 1985, Graden, Casey, & Christenson, 1985; Ponti, Zins, & Graden, 1988); intervention-assistance teams (Whitten & Dieker, 1995); school-consultation committee (McGlothlin, 1981); instructional-consultation teams (Rosenfield & Gravois, 1996) instructional-support teams (Kovaleski, Tucker, & Stevens, 1996; Pavan & Entekin, 1991); mainstream-assistance teams (Bahr, Fuchs, Fuchs, Fernstrom, & Stecker, 1993; Fuchs & Fuchs, 1989; Fuchs, Fuchs, & Bahr, 1990; Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990); and early-intervention teams (Kirner, 2000).

Safran & Safran (1996) report that intervention-assistance programs and prereferral teams have evolved from two primary sources-teacher-assistance teams, and prereferral programs (Sindelar, Griffin, Smith, & Watanabe, 1992). However, regardless of the design and approaches, all these teams are designed to provide problem-solving assistance to general-education teachers concerning the needs of students who are experiencing difficulties (Cosden & Semmel, 1992; Kruger, Struzziero, Watts, & Vacca, 1995). Intervention-assistance teams encourage professionals to share strategies (Whitten & Dieker, 1995).

While the broader vision for both may be similar (Whitten & Dieker, 1995), distinct components or characteristics separate the approaches. The following are some characteristics that represent the differences in each of the school-based problem-solving team categories.

Teacher Assistance Teams (Chalfant, Pysh, & Moultrie, 1979):

1. Collaborative problem solving (Safran & Safran, 1996)
2. General-education teacher ownership (Safran & Safran, 1996)
3. Immediate classroom assistance (Hayek, 1987)
4. Resources generated by group effort (Cosden & Semmel, 1992)
5. Support services to teachers rather than direct service (Cosden & Semmel, 1992)
6. Facilitation of collegial communication (Cosden & Semmel, 1992)
7. Opportunity provide to share expertise with others (Chalfant & Pysh, 1989; Hayek, 1987)
8. A more positive instructional experience (Cosden & Semmel, 1992)

Prereferral Programs (Graden, Casey, & Bonstrom, 1985; Graden, Casey, & Christenson, 1985; Ponti, Zins, & Graden, 1988); Mainstream Assistance Teams (Bahr, Fuchs, Fuchs, Fernstrom, & Stecker, 1993; Fuchs & Fuchs, 1989; Fuchs, Fuchs, & Bahr, 1990; Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990):

1. Use a formalized process (Safran & Safran, 1996)
2. Use behavioral consultation to reduce numbers of special-education referrals (Graden, Casey, & Christenson, 1985)
3. Are established as a prereferral step to special education (Graden, Casey, & Bonstrom, 1985)
4. Operate under special education ownership (Safran & Safran, 1996)
5. Provide consultation services (Sindelar, Griffin, Smith, Watanabe, 1992; Curtis, Zins, & Graden, 1987)
6. Use systematic documentation procedures using consultation services (Zins, Curtis, Graden, & Ponti 1988)

Teacher-Assistance Team (TAT)-type approaches have the vision of greater collaboration and teacher empowerment and a less formal approach to solving problems in the classroom. Prereferral-interventions tend to be more systematic and structured with the focus on the specialist and the “expert” role.

School-based, problem-solving teams (SBPTs) represent an approach to assisting schools in meeting the diverse needs of students (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999). Bahr, Whitten, Dieker, Kocarek, and Mason (1999) compared school-based intervention teams and noted the following ways successful intervention teams may assist schools: (1) the identification of parents and community agencies as potential

resources (Kagen & Lonow, 1990); (2) students with disabilities may remain in the least restrictive environment (Schloss, 1992); (3) support provided by general-education classroom teachers (Cosden & Semmel, 1992); (4) use of teams employing collaborative, problem-solving strategies (Chafant, Pysh, & Moltrie, 1979); (5) an emphasis on intervention (Evans, 1990; Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990); and (6) an alternative to the traditional “refer-test-place” practice that may result in fewer special-education referrals (Fuchs, Fuchs, & Bahr, 1990, pp.67-68).

In summary, there are many approaches, such as SBPTs, which implement service delivery models that address the varying needs of students. Many of these models emphasize collaboration. Collaborative models encourage educators to support one another while problem solving around the needs of individual students (Whitten, Dieker, 1995).

Issues Regarding Special Education Placement and Over Identification

There continues to be concern about the increasing numbers of students being serviced by special education. In 1986, Will estimated that 20% to 30% of school-aged children were having difficulties in schools. Many approaches and supports have evolved to address the needs of students experiencing difficulties. Special education is clearly one of these alternatives (Ysseldyke & Algozzine, 1982). From October 1976 to December 1980, the number of students’ served in special education increased by nearly 17% (Algozzine, Christenson, & Ysseldyke, 1982). One possible reason for the dramatic increase in the students served in special education was that special education developed a “massive system of identification” (Ysseldyke & Algozzine, 1982), and that this system was designed to allow the lack of tolerance by teachers for “differences” in their

classrooms. According to Hessler (2001), almost 50 % of all special-education students are considered to have a learning disability. Hessler reported data from the National Institute of Child Health and Human Development (NICHD: National Institutes of Health, Bethesda, Maryland), which showed that at least 20-30 % of American students cannot read well enough to complete schoolwork (Lyon, 1995a, 1997, 1998). Usually the only remedial services available are special education. Thus students are often diagnosed as LD so they can access the resources (Hessler, 2001).

Teachers refer students to intervention teams and/or related service personnel, because they want instructionally relevant information and helpful strategies (Ysseldyke, Christenson & Kovalski, 1994). Many of these prereferral approaches and interventions were established to provide assistance to regular-education teachers working with children experiencing difficulties in the classroom (Algozzine, Christenson, & Ysseldyke, 1982; Wood, Lazzari, Holcomb Davis, Sugai, & Carter, 1990; Ysseldyke, Algozzine, & Thurlow, 1992). The prereferral approaches described in the literature are an outcome of the limitations and extensive evaluation procedures regarding the identification of students as needing special-education services (Pugach & Johnson, 1988).

Pugach and Johnson (1989) provide the following information: The two categories of prereferral interventions are; (1) informal, school-based, problem-solving teams (Chalfant, Pysh, & Moultrie, 1979) and (2) consultation of special-education teachers (Friend, 1984; Graden, Casey, & Christenson, 1985; Idol-Maestas, 1983; Paolucci-Whitcomb & Nevin, 1985). The consultation by special-education teachers is considered as a clearly prereferral approach and more like a first step before initiating a referral to special education. The informal, school-based, problem-solving team

approach supports a school-wide collaborative structure, which recognizes the value of team and involvement of classroom teachers.

*Issues Regarding the Impact of
School-based Team Models*

Bahr, Whitten, Dieker, Kocarek, and Mason (1999) noted that the lack of uniformity among the variety of models and philosophies create misconceptions or lack of clarity regarding the various approaches. For example, does different names of teams reflect variations in purpose? Does the child-study team address referrals on a class-or school-wide problem? How does the prereferral team handle a case regarding an apparent disability? What determines the team's effectiveness? Given the variation of models, it is difficult to determine which approach may be employed, so researchers must ask for clarification of the models used (Welch, Brownell, & Sheridan, 1999).

A review of the professional literature available on the effectiveness and efficiency of school-based, problem-solving teams provides us with the following summary. The current literature on intervention assistance and prereferral programs and their effectiveness is both encouraging and disappointing. The literature on effectiveness of school-based, problem-solving teams provides empirical data that measure team effectiveness by (1) referral rates to special education, (2) positive student outcomes in learning or behavior, and (3) quality of teacher collaboration and teacher satisfaction (Safran & Safran, 1996). The focus is narrow and a dearth of research exists regarding the methods used to enhance the team effectiveness of these prereferral intervention or problem-solving teams (Carter & Sugai, 1989; Chalfant & Pysh, 1989; Lloyd, Crowley, Kohler, & Strain, 1988; Zins, Curtis, Graden, & Ponti, 1988). Research efforts should

concentrate on evaluating the effectiveness of prereferral systems and analyzing the variables associated with prereferral effectiveness (Carter & Sugai, 1989).

School-based, problem-solving teams (SBPSTs) need a research base that will provide: (1) effective framework for schools to use when establishing teams; (2) team process that emphasizes quality of interventions and collaboration among all staff; (3) effective strategies for use by the team to meet the needs of students; and (4) appropriate inservice training for team members (Whitten & Dieker, 1995).

Educators must continue to deal with diversity in general-education classrooms. Schools are witnessing the need for collaboration among educators to use all their resources effectively to meet the needs of students (Whitten & Dieker, 1995). The SBPST's play a viable role in assisting educators as they accommodate an increasingly diverse group of students (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999). What is critical here is identifying the variables and type of approaches that are the most effective. Information on what makes teams function effectively will help to create a common language and a common approach that encourages collaboration and problem solving to increase student success. Team members must establish an atmosphere where the sharing of ideas and problem solving is the norm and where individual opinions are respected (Schamber, 1999).

Teaming at the Middle-School Level

At the middle-school level, schools have moved to working in teams at grade level. More than 50% of middle schools in the United States have incorporated teaming as an organizational structure (Kain, 1999; Valentine & Whitaker 1997). However, the literature is filled with articles that focus on the effectiveness of these interdisciplinary

teams. Generally, the team meets to discuss issues such as planning field trips, preparing for student and parent conferences, getting ready for presentations, and completing administrative reports (Kommer, 1999). Now the need is to look at how these grade-level teams can use their time to problem solve more effectively regarding curriculum and students. A recently published longitudinal study shows that well-functioning middle-grade teams do result in significant student gains both academically and affectively (Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997). The definition of well-functioning needs to be addressed (Kommer, 1999).

A study conducted by Flowers, Mertens, and Mulhall (1999) looked at five research-based outcomes in connection with the impact of teaming at the middle-school level. The study found that schools with established teams noted the following: (1) common planning time is a critical component of interdisciplinary teaming; (2) a more positive work climate is achieved; (3) parental contact is increased; (4) greater job satisfaction is evident; and (e) increased student achievement in reading and mathematics is increased.

Teacher Assistance/Intervention Teams

Intervention-assistance programs and prereferral teams have evolved from two primary sources, Teacher-Assistance Teams and prereferral approaches (Safran & Safran, 1996).

The Teacher-Assistance Team (TAT) was introduced by Chalfant, Pysh, and Moultrie in 1979. The concept of the TAT was to provide a problem-solving support team to assist teachers in generating strategies and interventions for students experiencing difficulty in school. The TAT, separate from the multidisciplinary team designed to evaluate and identify students in special education, was comprised of various members.

Team membership was open to the principal, special-education personnel, teachers, and parents. The vision of this model was to provide a forum where classroom teachers could meet and engage in a positive, productive, collaborative, problem-solving process designed to help students indirectly through teacher consultation (Chalfant & Pysh, 1989; Chalfant, Pysh & Moultrie, 1979; Kirk & Chalfant, 1984).

Two recent studies worth mentioning at this time look at two models that incorporate some of the philosophical tenets set forth by the TAT. The Pennsylvania Instructional Support Teams (IST) model served as a bridge between special and regular-education programs with a focus on helping the regular-education teacher develop accommodations in the general-education environment (Kovaleski, Tucker, & Stevens, 1996). This problem-solving team with the assistance of an instructional-support teacher provides services to classroom teachers. Instructional support, the most recent name for the concept, has its roots in Connecticut where it was implemented under a program named "The Early Intervention Project" (EIP) (Tucker, 2001). A recent study, Kovaleski, Gickling, Morrow, and Swank (1999) examined the academic performance of students affected by this process in contrast with other at-risk students who did not have access to the process. This study looked at academic success as a variable for effectiveness of the IST team. The results did indicate that students supported by ISTs had a greater level of academic performance, but only in schools that were determined as high-implementation schools. Those schools considered low in implementation did not see the same success in student academics found in high-implementation schools.

In an unpublished dissertation by Kirner (2000), the Connecticut's Early Intervention Project (EIP) was identified as a model that establishes building-based teams

primarily of regular-classroom teachers to problem solve around the needs of students experiencing difficulty in school. The process supports classroom teachers through a systematic problem-solving process, where curriculum-based assessment data are collected and analyzed to provide effective interventions. Kirner analyzed the change in special-education prevalence rates in Connecticut schools participating in EIP as compared to other Connecticut schools not participating in the project. She found a significance regarding the differences in special-education prevalence rates supporting the use of the EIP model in Connecticut.

A group of studies relate more specifically to prereferral-intervention approaches. These approaches focus on more formalized, databased, behavioral consultation to reduce the number of inappropriate referrals to special education (Safran & Safran, 1996).

In 1985, Graden, Casey, and Christenson introduced the term prereferral-intervention model. It was defined as a consultation-service-delivery model based with the focus on using school-resource personnel. The goal of this approach was to reduce the inappropriate referrals and placement in special education and to provide relevant intervention assistance to students experiencing difficulties. A second study reported by Graden, Casey, and Bonstrom (1985) examined referral rates at three schools. As implementation of the intervention proceeded, placement rates declined. The work of Graden and colleagues (Graden, Casey, & Bonstrom, 1985; Graden, Casey, & Christenson, 1985) reflects an emphasis on the reduction of the number of students being referred and tested for special-education placement (Safran & Safran, 1996).

The work of several researchers on Mainstream Assistance Teams represents a comprehensive field-based analysis of prereferral consultation that includes direct

evaluation of student-learning outcomes (Bahr, Fuchs, Fuchs, Fernstrom, & Stecker, 1993; Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990; Safran & Safran, 1996).

Brown, Gable, Hendrickson, and Algozzine (1991) identified 10 frequently recommended prereferral strategies and surveyed teacher's use of these strategies. Outcomes of this study are recommendations for preservice and inservice training for regular- and special-education teachers.

Harrington and Gibson (1986) surveyed general-education teachers concerning the effectiveness of preassessment procedures. Teachers generally were pleased with the preassessment team members, but reported that they were unsure as to whether the interventions recommended by the team were effective.

Brown, Gable, Hendrickson, & Algozzine (1991) polled general educators concerning interventions most frequently used: the interventions topping the list included consulting with other professionals, parent conferences, behavior management techniques, and individual instruction (Safran & Safran, 1996).

Flugum and Reschly (1994) looked at quality indicators of prereferral interventions as a predictor of prereferral-intervention outcomes. This comprehensive investigation used quality indices to evaluate the effectiveness of prereferral programs. The results suggested: (1) prereferral interventions varied dramatically in quality, (2) the use of quality indices influenced the outcomes of prereferral intervention, and (3) improved quality of interventions led to more successful outcomes for students. One of the major conclusions of this study is that research and training is needed on how to apply more broadly the existing knowledge base on systematic problem solving with prereferral interventions (Flugum & Reschly, 1994).

Going one step further in analyzing of the professional literature, the following categories can be identified to categorize studies reporting effectiveness: (1) reducing the rate of referrals to special education and increasing appropriate referral to special education, (2) assessing academic or performance of the students being served, and (3) considering teacher or consumer satisfaction with the process and the functioning of the team.

First, a successful program of prereferral intervention can be expected to reduce the rate of referral to special education (Sindelar, Griffin, Smith, & Watanabe, 1992). Numerous studies demonstrate the effectiveness of prereferral approaches as measured by the reduction of referral rates to special education (Aksamit & Rankin, 1993; Brown, Gable, Hendrickson, & Algozzine, 1991; Chalfant & Pysh, 1989; Graden, Casey, & Christenson, 1985; Fuchs, Fuchs, & Bahr, 1990; Gutkin, Henning-Stout, & Piersal, 1988; Kirner, 2000; Kruger, Struzziero, Watts, & Vacca, 1995; Schrag & Henderson, 1996; Whitten & Dieker, 1995). Safran and Saran (1996) reviewed the literature on intervention assistance and prereferral programs to determine if referral rates to special education have been reduced and if accuracy rates in identification increased. In the Teacher-Assistance Team, Mainstream-Assistance Team, and prereferral- intervention programs associated with university model programs or training, consistent reductions in the percentage of students referred for special education have been found. However, some reports from the field noted negligible impact on the number of students identified (Flugum & Reschly, 1994; Safran & Safran, 1996).

Tucker (2001) reports that by introducing a simple collection of proven educational practices under the umbrella of instructional support, schools in at least four

states systematically have reduced the number of referrals to special education while seeing an increase in achievement and a decrease in grade retention.

Second, successful approaches should improve academic performance and classroom conduct or, perhaps, altered teacher expectations (Sindelar, Griffin, Smith, & Watanabe, 1992). Survey data collected from state agencies show a growing use of prereferral interventions (Carter & Sugai, 1989); but research related to actual classroom practices limited.(Brown, Gable, Hendrickson, & Algozzine, 1991; Chalfant & Pysh, 1989; Cosden & Semmel, 1992; Fuchs, Fuchs, Bahr, Fernstrom, & Stecker, 1990; Graden, 1989; Graden, Casey, & Christenson, 1985; Pugach & Johnson, 1989; Schrag & Henderson, 1996; Sindelar, Griffin, Smith, & Watanabe, 1992; Wood, Lazzari, Davis, Sugai, & Carter, 1990). More attention must be given to development of empirically proven treatment packages and the training of school personnel for them (Bahr, 1994). Typically, team procedure and process data report student goals only on the basis of the the professional's self-reporting (Safran & Safran, 1996). Measuring student learning is a difficult task. Many variables are difficult to control. Given this, it may be realistic to expect that students gains can be noted only when consistent, effective, and structured interventions are followed (Flugum & Reschly, 1994; Safran & Safran, 1996).

The studies that focused on student achievement as an indicator of success looked at the following: Brown, Gable, Hendrickson, and Algozzine (1991) identified 10 frequently recommended strategies to determine how often these strategies are used. The 10 most frequently used strategies were: individual instruction, behavior-management techniques, small-group instruction, curriculum modification, modification of physical arrangement of classroom, consultation with professionals, parent conferences, peer

tutoring, use of parent volunteers, and cooperative learning. A survey was sent to 355 regular-education teachers who represented a randomly selected 10% of the total teacher population of a southeastern school district. Teachers taught elementary through high school. The return rate of 56.6%. The findings include the following: (1) Elementary teachers appear to implement more prereferral strategies and have greater success than do middle- and high-school teachers and; (2) cooperative learning and peer tutoring were among the least frequently used strategies. As noted in the results, this finding is troublesome with the extensive data base surrounding these approaches (Brown, Gable, Hendrickson, Algozzine, 1991; Delquadri, Greenwood, Whorton, Carta, & Hall, 1986; Jenkins & Jenkins, 1987; Johnson & Johnson, 1986; Lloyd, Crowley, Kohler, & Strain, 1988; Reynolds & Salend, 1989; Slavin, 1987); (3) The majority of teachers are willing to work with school-based teams or outside consultants; (4) consultation with other professionals was rated the most commonly used prereferral strategy; (5) teachers reported approximately 15% of their students would require this type of support; (6) teachers seldom reported modifying the curriculum. This study was conducted to enhance teacher-education programs with an emphasis on collaboration between special education and regular-education preservice providers.

Whitten and Dieker (1995) surveyed the existence and function of the teaming process that schools use to support classroom teachers. This study consisted of a random sampling of 500 teachers with a return rate of 62%. The findings of this study reported that in addition to reducing referrals for formal evaluation and testing, several methods of support were identified: This study looked at the most frequently used and most successful strategies. The most frequently used strategies named are behavior

management, curricular modification, individualized instruction, small-group instruction, peer tutoring, and consultation with professionals, teacher observations, and cooperative learning. The strategies that were most successful included behavior management, peer tutoring, individualized instruction, small-group instruction, and consultation with professionals, teacher/student conferences, teacher observations, and cooperative learning. The percentages for the methods of support were specific strategies (27%), conducting observations (19%), sharing materials (17%), conferring with parents (15%), suggesting other personnel for support (15%), and charting behavior (14%). Unlike the Brown, Gable, Hendrickson, and Algozzine (1991) study, Whitten and Dieker (1993) reported different strategies as most frequently used and most successful. Over 50% of the teams identified behavior management as the most frequently and successfully used strategy. This study also included findings about team process, team composition, and teacher inservice training. Discussion of these findings can be found in the next section. The conclusion in the Whitten and Dieker study relative to the strategies used was that teams use a wide spectrum of teaching strategies and team support. There is a need to determine long-term effectiveness of these strategies.

Aksamit and Rankin (1993) investigated effectiveness of the prereferral team by analyzing responses to several questions which included the number of intervention strategies, on the average, generated per child, and the number of students referred to the team that were eventually referred to special education.

Kovaleski, Gickling, Morrow, and Swank (1999) examined the academic performance of students affected by Instructional Support Teams as contrasted with at-risk student not connected to the process. The dependent measures were time on task,

task completion, and task comprehension. The results indicated that students supported by the Instructional Support Team had greater levels of academic performance only when their school implemented the process to a high degree. Low Instructional Support Team implementation produced no differences in academic performances. The critical components that were part of a high degree of implementation included, team structures (broad faculty membership, group procedures, interpersonal communication skills, effective meeting logistics); effective leadership; extensive up-front and ongoing data collection to inform decision making; and involvement of support teachers to establish and implement strategies suggested by the team.

The issue for many is not where service is provided but improvement in student learning. This issue was addressed by the study and results confirmed that students do improve but only in schools with a high degree of implementation. This study is critical to the research base on effectiveness of prereferral teams. It supports the idea that even though schools may have problem-solving teams in place, the goal of the process, which in the end is connected to student learning, may not be realized if other critical elements are not in place. The study goes on to indicate that students in high-implementation IST schools displayed favorable upward trends over time, resulting in better time-on-task, task completion, and comprehension.

This study looked primarily at student achievement and did not examine the specific factors of the high implementation schools that contributed to the success. The study demonstrated overall features. This study noted that all schools in the study, even low implementers, had regular meetings, basic collaborative-team structures, team procedures, and interpersonal communication skills. Effective meeting strategies,

however, may not have been enough to realize successful student outcome. Schools that demonstrated high levels of implementation were observed to have all of the above and a strong principal leader, extensive up-front and on-going data collection to inform decision making, and the involvement of a support teacher to establish and fine-tune strategies that were selected. Kovalski, Gickling, Morrow, and Swank (1999) note that the interpretation that prereferral teams are organizational structures that do not guarantee that effective interventions will be used (Sindelar, Griffin, Smith, & Watanabe, 1992) is supported here. The absences of components such as strong leadership, systematic process, on-going data collection, and the monitoring of student progress may not produce high-quality intervention (Flugum & Reschly, 1994; Fuchs & Fuchs, 1989; Kovalski, Gickling, Morrow, & Swank, 1999).

Flugum and Reschly (1994) looked at quality indicators of prereferral interventions recommended by prereferral teams in Iowa. The study looked at the effectiveness of interventions when teams used a systematic problem-solving process. The quality indicators included behavior definition, direct measures, step-by-step planning, treatment integrity, graphing of results, and direct comparison to baseline data. The findings showed that despite the low implementation of quality indices in prereferral interventions, regular educators and related services personnel saw those interventions that did involve the indices as more successful. The authors of this study suspect that greater implementation of the quality indicators would produce more effective interventions and better outcomes for students.

This is in line with the Kovalski, Gickling, Morrow, and Swank (1999) study that identifies the ongoing up-front and follow-up data collection and identifies the need

to monitor progress and provide training on how to apply more broadly the existing knowledge base on systemic problem solving with prereferral interventions. A team's effectiveness may be hampered by a number of problems that relate to the unsystematic collection and analysis of data, a loosely constructed decision-making process, and/or lack of collaboration and trust (Pfeiffer, 1981).

Prereferral-intervention approaches, including problem-solving teams, should measure some type of consumer satisfaction (Sindelar, Griffin, Smith, & Watanabe, 1992). Team satisfaction and effectiveness of team function is difficult to measure. Many of the studies mentioned above had some evaluative measure of team functioning and effectiveness (Abelson & Woodman 1983; Aksamit & Rankin, 1993; Bay, Bryan, & O'Connor, 1994; Chalfant & Pysh, 1989; Chalfant, Pysh, & Moultrie, 1979; Cosden & Semmel, 1992; Fimian, 1986; Fleming & Fleming, 1983; Harrington & Gibson, 1986; Hayek, 1987; Kovalski, Gickling, Morrow, & Swank, 1999; Kruger, Struzziero, Watts, & Vacca, 1995; Safran & Safran, 1996). "The criterion on which prereferral intervention ultimately should be judged is improvement in educational practice" (Sindelar, Griffin, Smith, & Watanabe, 1992, 248).

Chalfant et al. (1979) and his colleagues did an earlier study of Teacher Assistance. They looked at seven schools in Illinois and evaluated the impact of these teams on student referrals over the course of a year. Later in 1989, Chalfant and Pysh summarized five program-development studies, incorporating 96 TAT teams in seven states. This study produced six variables related to TAT effectiveness: (1) strong administrative support from building principals; (2) attitudes of service providers in the school toward the TAT and willingness to participate in the process; (3) team training; (4)

team efficiency; (5) networking with other teams; and (6) use of formative and summative evaluation procedures. Chalfant and Pysh (1989) discovered (1) high levels of teacher satisfaction with intervention plans and (2) positive judgments by teachers about student improvement.

The research of Chalfant, Pysh, and their colleagues was not experimental, and the authors are the first to acknowledge this point. However, the scope of their program of research—the fact that studies were conducted over a decade, in seven states in rural, urban, and suburban schools, attests to the relevance and validity of their approach among school professionals and adds to the credence of their findings. (Sindelar, Griffin, Smith, & Watanabe, 1992, 251)

Kruger, Struzziero, Watts, and Vacca (1995) examined the relationship between organizational support and satisfaction with a collaborative problem-solving structure using the teacher-assistance team model. Four types of organization support were looked at: (1) administrative support, (2) perceived purpose of the TAT, (3) social support among staff, and (4) satisfaction of both TAT members and the consumers of their services. Twenty-seven elementary schools were studied in Massachusetts, using 161 TAT members and 127 consumers of TAT services. The findings of this study support the need for administrative support when implementing a collaborative problem-solving structure in a building. Administrative supports such as release time, training, materials, and supplies are critical. In addition, leadership support with positive feedback to the team is important. Attention should be paid to the purpose of the TAT. This clearly relates to the success of the team and staff perception.

With diversity growing, teachers will continue to struggle daily with the challenges of meeting the needs of students, so the development of effective intervention-assistance teams appears to warrant the investment of time and energy (Whitten & Dieker, 1995). A synthesis of the professional literature regarding the effectiveness of

school-based, problem-solving teams leaves room for additional information on approaches that make teams more effective. The analysis of EIP team members' personality preferences, as defined by the MBTI, can provide critical information to enhance the approaches designed to improve team functioning and effectiveness.

In summary the review of the professional literature provides the following areas as measures of effectiveness: (1) a reduction in referral rates to special education and increased appropriateness of special-education referrals, (2) a change in student academic or behavior performance and/or type of strategies and interventions used, and (3) administrator, teacher, and or team satisfaction related to the services provided by the teams.

In the study by Kovalski, Gickling, Morrow, and Swank (1999), the findings show that when comparing high versus low implementation of instructional support teams, that students supported by Instructional Support Teams (IST) in high-implementation schools had greater levels of academic performance, and low-implementation ISTs produced no differences in academic performance in schools that had not implemented the IST process. Kovalski and his colleagues (1999) go on to note that both high-and low-implementation schools had similar structures in place such as regular meetings, collaborative-team structures, broad faculty membership, egalitarian group norms and procedures, interpersonal communication skills, and effective meeting logistics. These supports and characteristics were not enough to realize improved student performance. Schools that demonstrated high levels of implementation not only had the basic features, but had strong principal leadership, extensive up-front and on-going data collection to inform decision making, and the involvement of a support teacher

(Kovaleski, Gickling, Morrow, & Swank, 1999). Flugum and Reschly (1994) noted a need for training teams on how to utilize a systematic problem-solving process. Many researchers have noted the dearth of information in the research regarding the effectiveness of prereferral systems (Carter & Sugai, 1989).

Welch, Brownell, and Sheridan (1999) conducted a review of the literature on team teaching and school-based, problem-solving teams. Articles published in refereed journals from 1980 to 1997 were reviewed. The review was designed to identify types of articles published on team teaching and SBPSTs, and to draw some conclusions regarding current trends and provide recommendations on outcome research. The results indicated that most of the articles are anecdotal reports or technical guides for implementing the models. This review concluded that there is a lack of experimental designs and reports of student-based outcomes. Continued research is necessary to determine the extent to which SBPSTs are effective in facilitating meaningful change in student performance. The authors also note the need to assess the function and procedures of SBPST through formative evaluation procedures to determine efficiency in terms of cost-benefit ratio.

What Makes School-based Teams Effective?

Whitten and Dieker's (1995) study of the teaming process that schools use to support classroom teachers revealed findings around team composition and team process. The survey was conducted with more than 300 teachers in Illinois. The results around team composition reported that teams were made up of representatives of building personnel and that the majority of teams met weekly. Teams were asked to provide information about their process. The percentages revealed that 74% reported they had a

standardized procedure (problem-solving process) for analyzing a student's problem:

73% indicated they had specific roles for team members (concerns were raised about the monitoring of strategies); 52% indicated that the team worked toward consensus but only 33% stated that the general-education teacher made the final decision. 50% indicated that parents are kept abreast of the process but not part of the meeting; and 46% kept formal documentation on the activities and issues discussed during team meeting time.

Recommendations that resulted from this survey focused on such areas. (1) training for team members and staff; (2) developing a team process and meeting norms with shared decision making; (3) broad faculty representation including individuals working with the student and families; and (4) using of an effective problem-solving process that generates strategies and monitors progress. Noted in this study was the importance of building-administrator support.

Few educators are trained or prepared to work on teams. The skills needed to be an effective team member are challenging and sometimes frustrating for even the most dedicated and caring teacher (Brown, Gable, Hendrickson, & Algozzine, 1991; Flowers, Mertens, & Mulhall, 2000; Hayek, 1987; Welch, Brownell, & Sheridan, 1999).

Safran & Safran's (1996) study on Intervention Assistance Programs and Prereferral Teams noted that researchers have concluded that educators are positive about the process, the goals, and the importance of team problem solving. Direct measures of student learning are lacking in the research (Welch, Brownell, & Sheridan, 1999). Fuchs and Fuchs (1992) raised the issue of whether "style" or level of collaboration should be sacrificed for intervention effectiveness since our main goal is to provide success for the student. This is supported by research indicating that the less-effective programs produce

lower satisfaction rates of general-education teachers and teachers, refer fewer students for consultation (Harrington & Gibson, 1986; Inman & Tollefren, 1988).

Bahr, (1994) assessed the current status of prereferral practices in the state of Michigan, where 49 directors of special education responded to a survey. Several trends were documented from this study: general-education teacher participation on teams was high and a call was made for preservice and in-service training of teachers (Wood, Lazzari, Holcomb-Davis, & Sugai, Carter, 1990). Also, principals were noted as being involved in the design, implementation, and evaluation of the prereferral intervention. Bahr noted a low level of participation by special-education teachers on the prereferral teams. Bahr goes on to note that a better way is needed to determine efficacy of prereferral systems (Brown, Gable, Hendrickson, and Algozzine, 1991; Harrington & Gibson, 1986; Nelson, Smith, Taylor, Dodd, & Reavis, 1992).

Aksamit and Rankin (1993) surveyed 46 coordinators of SATs in a midwestern state. The study looked at team composition and team procedures and issues relating to the team functioning and effectiveness of the team. The teams referred to as problem-solving teams did not generally involve the classroom teacher. However, there was evidence of considerable administrative involvement. The study addressed issues around team functions, team membership, longevity of team members, frequency of meetings, parental involvement, expectations of teachers, and expectations of team members. Reported in this study was the need to have ongoing staff development and training. Interestingly, it was noted that some teachers viewed this problem-solving team as a “support group” where teachers could come and share concerns, and get encouragement

and ideas. Several recommendations regarding team effectiveness reported from in this study are similar to the Whitten and Dieker study in 1995:

1. Establish clear goals for the team—the vision and intent of the team and the process needs to be articulated. The process is to empower general-education teachers to be more successful in educating all students. Behaviors and practices should model this.
2. Clarify the roles the team will serve—the problem-solving team needs to be clear on how it will operate. A framework needs to be provided.
3. Composition of team—team make-up needs to be carefully thought out. Informal problem-solving teams with little or no representation by classroom teachers run the risk of becoming another layer of bureaucracy (Pugach & Johnson, 1989).
4. Allocate sufficient time and resources as teams need time to meet and work together.
5. Model problem-solving, risk-taking, and flexibility throughout the process—sometimes it is systemic issues, not kid issues, that are the problem.
6. Develop record-keeping procedures that document student plans and progress—documentation and data-driven procedures are important in determining success.
7. Meet in-service training staff needs—support in training and technical assistance for staff.
8. Formulate an evaluation plan to determine whether team goals are being met—did the team accomplish what it was supposed to do. Follow up, both immediate and on-going, is essential for an effective process. The importance of team members' knowledge

and commitment are two critical factors in the success of the team (Akasmit & Rankin, 1993).

Phillips, McCullough, Nelson, and Walker (1992) review the Teacher Assistance Team process being implemented and tested in Kentucky. The following are essential components identified in the Kentucky model: (1) administrative support and systems-level coordination; (2) multilevel participatory planning and decision making—staff at all levels needs to be involved; (3) ownership that supports motivation and collaboration, and team structures that allow teachers to be empowered; (4) feasibility in relationship to format, and intervention selection; (5) training and resources available for implementation; and (6) interdisciplinary training and shared responsibility to problem-solve around the needs of students.

Wood, Lazzari, Davis, Sugai, and Carter (1990) surveyed state directors of special education. They noted that 34 states that reported requiring or recommending a prereferral process should consider a systematic training program for regular educators who implement the process and administrators who supervise it. They also suggested that teacher-education programs should be preparing regular educators to participate in such a process. This study noted the importance of the regular educator's role in the referral-to-placement process.

Bahr, Whitten, Dieker, Kocarek, and Mason (1999) examined the practices of school-based intervention teams from Michigan, Illinois, and Wisconsin. This study represented over 600 professionals and 121 intervention teams. The survey studied the nature of referrals addressed by the team, perceptions of team effectiveness, identification of professionals who best facilitate team problem solving, and the use of quality indices

in intervention development and implementation. The authors of this study noted that the knowledge regarding the process that intervention teams follow is limited. What is the most effective problem-solving process and team composition? Chalfant, Pysh, and Moultrie (1979) originally proposed teams of general-education teachers, but other approaches currently in the literature show that teams are made up of a variety of school personnel. Bahr, Whitten, Dieker, Kocarek, and Mason's (1999) study was designed to provide salient information on several uninvestigated areas. It found that (1) most teams do function at the prereferral level rather than focusing on referrals to special education. (2) Teams function in a positive and effective manner. (3) High ratings were given to the team-effectiveness scale viewing collaboration as essential in the consultation/intervention process. (4) Certain quality indices, i.e., assignment of specific roles to team members and the use of permanent products to evaluate academic progress, were reported to have higher use. Concerns were raised regarding follow-up by team members and documentation of effectiveness of strategies. This supports findings in other studies.

Flowers, Mertens, and Mulhall (2000) looked at what makes middle level interdisciplinary teams effective. They noted that for many teachers being assigned to a team for the first time represents major changes for individuals and requires skills in collaboration, teamwork, and communication. Once teams have established professional and interactive relationships, they must learn how to best work in these relationships. Few educators are trained or prepared to work as members of teams. In their findings, Flowers et al. cite the need for teachers to learn how to work together as this will enhance teaching and learning in the classroom. They also note that common planning time is needed for teachers to work together that teams responsible for fewer students have more

frequent team activities and student contact and that teams working together for longer periods of time have the benefit of developed relationships and greater productivity. The authors report that schools that have teaming have a more positive school climate, make more frequent contacts with parents, have higher job satisfaction among teachers, and report higher student-achievement scores.

What then, are the essential components of effective teams? The following characteristics or components have been identified from the literature in connection with effective team functioning. Effective teams have:

1. Administrative support (Harrington & Gibson, 1986; Paven & Entrekin, 1991).
2. A systematic problem-solving process—driven by data incoming and outgoing and establishing measurable goals so progress can be monitored (Rottier, 2000).
3. Regular-education ownership (Brown et al., 1991; Carter & Sugai, 1989; Pugach & Johnson, 1989).
4. A clear understanding of its purpose (Zander, 1994).
5. The right mix of skills, i.e., technical or functional expertise, problem-solving/decision making skills, and interpersonal communication skills, are needed to do the team's job (Katzenbach & Smith, 1993).

Members of an effective problem-solving team possess the following skills: (1) effective communication skills, and (2) understanding of curriculum-based assessment and data-collection procedures (Rosenfield, 1987; Rosenfield & Gravois, 1996). Also, effective team is a unified group of people who join together in a collaborative problem-solving process to reach a shared goal (Morsink, Thomas, & Correa, 1991).

The Connecticut Early Intervention Project and the Pennsylvania Instructional Support Teams build into their training of school-based teams both collaboration and team building, which incorporate a systematic problem-solving process and an instructional assessment component (Kovaleski, Tucker, & Stevens, 1996; Kirner, 2000).

Many of the studies cited above included recommendations on essential components of effective teams. Huszycz (1996), in *Tools for Team Excellence*, noted seven key components of effective teams based on research and the experiences of more than 100 teams from a wide variety of organizational settings. Many of these components were also noted in the studies cited elsewhere. The components identified by Huszycz (1996) that provide a framework for discussing critical elements of effective teams including the following:

1. *A clear sense of direction where the purpose is shared and the goals and values are understood and agreed to.* It is important for teams to have a shared purpose and shared goals (Aksamit & Rankin, 1993). To build a "learning organization," there needs to be a shared vision and systems need to hold a shared picture of the future sought (Senge, 1990). School-based, problem-solving teams need that shared vision and goal. The purpose of the team is to provide strategies and interventions for students within the regular-education classroom.

2. *Talented members with a full complement of skills and knowledge available relevant to the task.* Teams are enhanced when team members, such as a general-education teacher with the skills and knowledge relevant to the task, who provide critical information when developing effective classroom strategies (Aksamit & Rankin, 1993; Brown, Gable, Hendrickson, & Algozzine, 1991; Carter & Sugai, 1989; Pugach &

Johnson, 1989; Phillips, McCullough, Nelson, & Walker 1992; Whitten & Dieker, 1995). If our vision of the collaborative problem-solving team is to support students in the classroom, then classroom teachers have to be part of the team.

3. *Clear and enticing responsibilities where expectations of leadership and other roles are clearly defined and communicated.* The principal's role is essential in the success of a team. In addition, team members have to be clear as to their roles, responsibilities, and expectations. Teams also need the support and reinforcement of the building leadership (Phillips, McCullough, Nelson, & Walker, 1992; Whitten & Dieker, 1995).

4. *Reasonable and efficient operating procedures.* A system must be in place to plan, conduct meetings, identify and solve problems, make decisions, share information and evaluate progress (Aksamit & Rankin, 1993; Whitten & Dieker 1995). Teams need to follow a systematic problem-solving process to be effective. Ground rules should include specific starting and ending times and interruptions should be eliminated during meetings (Rottier, 2000). One of the most important procedures a team needs to commit to is a systematic approach to problem solving (Huszczo, 1996). Many problem-solving models are available. The key for teams is to have a process that can be easily implemented and is consistently systematic. Since it is essential for teams to use a process consistently, the system chosen should be effective but not overwhelming. For school-based, problem-solving teams, the process should be driven by data. Productive group work is driven by data, which should be utilized in a systematic way (Garmston & Wellman, 1999). Curriculum-based assessment, an alternative to traditional assessment

practices, offers information to ensure effective instruction (Gickling & Thompson, 1985).

5. *Constructive interpersonal relationships with group maintenance of teams that celebrate and support diversity.* Communication and interpersonal skills are essential to any team structure (Rosenfield & Gavois 1996).

6. *Active reinforcement systems that assume desired rewards and accountability for groups and individuals.* School-based, problem-solving teams are accountable to student success. Systems need to be in place to monitor the progress of students once interventions are in place.

7. *Constructive external relationships that have good relationships with other groups and people or subsystems.* Good relationships with other groups outside the team. School-based, problem-solving teams need to utilize all available resources within the building. Collaboration school-wide is critical for an effective process. The talents of each individual need to be used so the power of collaboration can be recognized (Rottier, 2000). The opportunity to pursue a shared professional vision in collaboration once experienced with others is valued by those involved (Bishop & Stevenson, 2000).

Myers-Briggs Type Indicator (MBTI)

Many have turned to tools such as the Myers-Briggs Type Indicator (MBTI) to assist in personality-inventory analysis to provide data on team effectiveness (Hammer & Huszczo, 1996). Although the use of the MBTI to help understand and build teams dates back to Myers's (1974) and McCaulley's (1975) work with health-care teams, the instrument has found new popularity in using the MBTI with teams and organizations

(Hammer, & Huszczo, 1996). This knowledge of individual preferences helps in identifying natural, individual differences and how these differences enhance the components connected to effective teams.

If one can clearly articulate the components for effective teams such as good interpersonal communication skills, then one can predict which personality characteristics would be best to serve on school-based, problem-solving teams. There is a belief that the variety of skills, knowledge, experience, style, and other skills on a team enhances the team process (Hammer & Huszczo, 1996). Some research shows that groups do make better decisions than individuals (Hammer & Huszczo, 1996; Katzenbach & Smith, 1993). However, team members often have certain preferences in dealing with a team process (Hammer & Huszczo, 1996). It is helpful in understanding the preferences of individuals to seek the maximum effectiveness of the team. In the area of constructive and interpersonal relationships, information regarding individual preferences and approaches can be invaluable. Given the growing use of the team approach in the workplace, many organizations have sought increased training around team functioning.

Effective teaming, like any relationship, takes time to develop and work out (Dickinson & Erb, 1997; Erb & Doda, 1989; Merenbloom, 1991; Rottier, 1996; Schamber, 1999; Schurr, Thomason & Thompson, 1995). Good teams do not just happen, they require deliberate effort in order to succeed (Schamber, 1999).

A review of the literature clearly outlines the need for more information that will help determine how to implement a more effective process to meet the needs of students experiencing difficulties in schools. The educational-reform movement is calling for more collaborative structures in the schools. Current research on school-based, problem-

solving teams measure success primarily on the referral and placement rates for special education. This study examines the personality characteristics of team members to determine if this information is significant in the effectiveness of the team.

Researchers want to know why some teams function more effectively than others and what are the crucial factors to consider in creating effective teams (Martin, 1999). As budgets become tighter, it is essential to demonstrate that the time and structures devoted to establishing teams have a positive effect on student achievement (Rottier, 2000).

Connecticut's Early Intervention Project

In 1985, the Connecticut Early Intervention Project (EIP) was initiated with the following goals: (1) to reduce inappropriate referrals to special education; (2) to reduce the number of inappropriate referrals for formal testing and evaluation; and (3) to reduce the inappropriate, special-education classification of students, especially those from minority groups. The project offered schools across Connecticut with training and on-site technical assistance. The training and technical assistance was designed to assist schools in establishing a school-based, problem-solving team designed to support teachers in meeting the diverse learning needs of students.

The training and technical assistance focused on skills and competencies in collaboration, communication, effective problem solving, and collecting meaningful data such as curriculum-based assessments and observational assessments. The project incorporated a problem-solving process that assists teachers in the analyzing of concerns, collects curriculum-based and/or observational-based assessments to drive strategies, student-action plans, and the monitoring of student progress. The skills and

competencies involved in the training and technical assistance emphasizes the importance of using curriculum-based assessments, which holds that each student's needs are best defined in terms of their current curriculum (Tucker, 1985). Effective instructional assessment measures what children know, what they can do, and how they think so that student needs can be determined (Gickling & Thompson, 2001). Teams need to be trained to problem solve using the appropriate instructional assessments. "A fundamental premise of EIP is the establishment of building-based teacher teams that move away from an expert model of problem solving to one that institutionalizes the role of classroom teachers as the "expert" (Kirner, 2000, 68).

The major components of a successful EIP model are identified as: (1) team structure that includes a membership primarily made up of classroom teachers who are viewed as the "experts" on the team and that allows the requesting teacher to decide what strategies and interventions will be used; (2) a problem-solving process that is used to guide the team and includes clearly identified objectives, brainstorming, student-action planning, and monitoring of student progress; and (3) data-collection procedures that focus on non-standardized tests and on curriculum-based materials.

In Connecticut, over 172 schools from 57 districts were trained in this model by the 1996-97 school year (Connecticut State Department of Education, 1998). In 1998-99, EIP teams reported serving 4,016 students. Of these students, 24% were referred to special education and 68% were cases closed (goals achieved) or ongoing (Carroll & Carroll, 2000).

In the 1998-99 school year, Connecticut's Special Education Resource Center (SERC) initiated a process, called the Quality Assurance Model, as part of the EIP. This

follow-up service allowed staff to “check-in” with teams. This support allows a full-day interview that provides teams with a diagnostic analysis with immediate feedback and offers on-site consultation and technical assistance around the essential components of effective school-based problem-solving teams (Carroll, 1999). This process is designed to provide trained, EIP school-based teams with an opportunity to reflect and dialogue about issues concerning their “Early Intervention Process.”

As part of this follow up, support, and on-site visits, teams reflected on their current practices. Each team member was given the MBTI to help facilitate discussion and dialogue on how the team members can better participate in the vision and mission of the team. The MBTI was used to provide team members with an opportunity to experience a common language regarding individual preferences in attending to or learning new tasks, making decisions, interacting with others, and organizing responsibilities. The MBTI provided teams with a valuable tool designed to celebrate the diversity and preferences on the team and to discuss and reflect on how these preferences can strengthen the team process.

A team that works well together is not a chance event, and when team members understand their styles and those of others, they are likely to be more effective (Hirsh, 1992). Teams that come to appreciate and use different types of preferences may experience less conflict (Hirsh, 1992; McCauley, 1975). Acknowledging one’s own preferences opens the possibility of finding constructive values instead of conflicts in differences one may encounter with others who have different or opposite preferences (Lawrence, 1996).

It is thus believed that understanding the impact of personality characteristics involved in team functioning creates a more effective collaborative relationships, a better appreciation for individual's unique gifts and contributions, and a common language and understanding of how to best work together to problem solve and meet the needs of students.

CHAPTER III

METHODOLOGY

Research Design

The overall research design of this study consists of a comparison of two groups of Early Intervention Project (EIP) schools. Each group consisted of a building-based team of educators and support staff. The EIP described in chapter 2 is supported by the Connecticut State Department of Education and was initiated in 1985. An EIP team is responsible to support teachers and students within individual school buildings. Teachers request the support of the EIP team to problem solve and develop strategies and interventions for students experiencing academic or behavioral difficulties in the classroom. EIP-trained schools are provided with formalized training and technical assistance for approximately two years. The training and technical assistance support focuses on (1) a systematic process of problem solving; (2) the collection and analysis of appropriate, curriculum-based and observational-based assessment; (3) effective strategies and techniques for the development of interventions and the monitoring of student progress; and (d) skills needed for effective collaborators.

The goal of the EIP team is to provide support to the teacher who is working with students experiencing difficulties. The team works with teachers to identify

areas of concern and initiates documentation regarding the concerns and supports provided. If the team determines that the child is not being successful, a referral to special education can be made.

This study compared the personality characteristics as defined by the MBTI of team members who serve on trained EIP teams. These teachers and staff members problem solve and work with other teachers within their school buildings to develop strategies and interventions for students experiencing difficulties in the classroom. Two groups of EIP schools were compared in this study. They were classified as successful EIP schools and non-successful EIP schools.

This ex-post facto study identified successful and non-successful EIP teams based on special-education prevalence rates. Special-education prevalence for each school is the percentage of the school-age population with disabilities receiving special education. The prevalence rate was obtained from Connecticut State Department of Education database of students with disabilities who receive special education.

The EIP team can make a referral to special education if the team feels the strategies and interventions recommended are not assisting the student to be successful in the classroom. For purposes of this study, schools that had 12% or less of their student population identified as special education were classified as *successful* EIP schools. Schools that had more than 12% of their student population identified as special education were classified as *non-successful* EIP schools.

Special-education prevalence rates were computed to sort the schools into two categories, successful and unsuccessful. Special education prevalence rates, for the 1998-99 school year, were used as these were the most current data available. These rates were

calculated based on the total school population and the percentage of identified special education students.

The independent variable is school type in the context of EIP teams that represent EIP-trained schools within Connecticut that are considered trained in a school-based, problem-solving process as defined by the Connecticut Early Intervention Model described in chapter 2.

The dependent variables in this study consisted of the eight scales on the Myers Briggs Type Indicator (MBTI), which are interval scaled. The scales range from 0-26. This study considered how the various personality TYPE preferences affect the skills and competencies taught in EIP training and in technical assistance. The interval scales on the Myers Briggs Type Indicator (MBTI) are Extraversion, Introversion, Sensing Perception, Intuition Perception, Thinking, Feeling, Judgment, and Perception.

General Research Questions and the Null Hypotheses

The overall research question asks *Is there a difference in the personality type preferences of successful EIP team members versus unsuccessful EIP team members?*

The primary null hypothesis states: *There is no difference in the personality-type preference of successful EIP team members versus unsuccessful EIP team members.* This study identifies successful and non-successful EIP teams based on special-education prevalence rates of EIP-trained schools. Special-education prevalence for each school is a percentage of the school-age population with disabilities receiving special education as identified by the Connecticut State Department of Education.

This study goes on to examine the following sub-null hypotheses based on the eight interval scales of the Myers Briggs Type Indicator (MBTI) and the work of Carl

Jung. It also determines how the skills and competencies of the EIP training may have been affected by these preferences. Do certain TYPE preferences respond more successfully to the essential characteristics of the Early Intervention Model? How has TYPE preference affected the application of the skills and competencies of the Early Intervention Model on the special-education prevalence rates for EIP trained schools?

1. There is no difference in the Extraversion/Introversion characteristics of successful EIP team members versus unsuccessful EIP team members
2. There is no difference in the Sensing Perception/Intuition Perception characteristics of the successful EIP team members versus unsuccessful EIP team members
3. There is no difference in the Thinking/ Feeling Judgment characteristics of the successful EIP team member versus unsuccessful EIP team member
4. There is no difference in the Judgment/Perception characteristics of the successful EIP team member versus unsuccessful EIP team member.

Sample

Connecticut has 169 school district-645 elementary schools, 163 middle schools, and 163 high schools. Of the total population of schools, 186 schools are defined as EIP trained schools. Trained EIP schools have participated in the training and technical assistance provided through the Connecticut Early Intervention Project (EIP) as described in Chapter 2. The EIP schools selected as part of this study also participated in the EIP Quality Assurance/Reflective Team Process. This follow-up support provided 26 elementary and middle schools with on-site technical assistance that included an assessment of team functioning. Analyses were conducted at the building level. The 26

participating schools represented 21 school districts in Connecticut. A total of 173 team members were included in the database. These individuals were members of the school-based, problem solving teams responsible for problem-solving and supporting teachers in a collaborative structure to assist students experiencing academic or behavior difficulties in the classroom. Of the 26 participating schools, 22 were elementary schools (Kindergarten to Grade 5) and four were middle schools (Grades 6 – 8). The student population of each school ranged from 181 to 976; school-poverty percentages ranged from 2.3 % to 45.8%.

Instrument

The Myers Briggs Type Indicator (MBTI) was used as the instrument to determine personality characteristics of team members. The MBTI was chosen because of its research base and longevity. It has been used to assist in personality-inventory analysis in order to provide data on team effectiveness (Hammer & Huszycz, 1996). Although the use of the MBTI to help understand and build teams dates back to Myers's (1974) and McCaulley's (1975) work with health-care teams, the instrument has found new popularity in use with teams and organizations (Hammer & Huszycz, 1996).

The MBTI is a tool to provide knowledge of individual differences that will help in identifying particular talents and gifts each team member brings to the task. A knowledge of individual preferences helps to identify natural individual differences and how these differences enhance the components connected to effective teams.

The intent of the MBTI is to make the theory of psychological types described by Jung (1921;1971) understandable and useful in people's lives (Myers & McCaulley, 1985). The instrument is based on Jung's ideas about perceptions and judgments, and the

attitudes in which these are used by different types of people. Human behaviors, seemingly random, actually are quite orderly and consistent in individuals. The goal of the MBTI is to identify, from a self-reporting questionnaire, the basic preferences of people in regard to perception and judgment so that the effects of such preferences can be put to practical use.

According to Myers and McCaulley (1985), the MBTI differs from many other personality instruments in the following ways: (1) It is designed to implement a theory; and the theory needs to be comprehend the instrument. (2) The theory postulates dichotomies; therefore, some of the psychometric properties are unusual. (3) Based on the theory, specific dynamic relationships are found between the scales, which lead to the descriptions and characteristics of sixteen "types." (4) The type description and theory include a model of development that continues throughout life. (5) The scales are concerned with basic functions of perception and judgment that enter into almost every behavior; therefore, the scope of practical application is very wide (p 1-2)

The Myers-Briggs Type Indicator (MBTI) contains four separate scales to reflect one of four basic preferences which, under Jung's theory, directly connects with the use of perception and judgment. The following information is gleamed from the study done by Myers and McCaulley (1985). The scales to determine the MBTI are:

Extraversion/Introversion—the scale designed to reflect a person's preference in an extravert or an introvert in the sense intended by Jung (1921/1971, p. 160). Extraverts are oriented primarily toward the outer world and tend to focus their perception and judgment on people and objects. Introverts have a preference toward the inner world and tend to focus their perception and judgments upon concepts and ideas.

Sensing perception/Intuitive perception—the scale designed to reflect a person's preference between two opposite ways of perceiving. Sensing-perception preference relies primarily upon the process of sensing, which reports observable facts or happenings through one or more of the senses. The intuitive-perception preference relies on relations and being aware of the possibilities or seeing the big picture rather than the process of getting there.

Thinking/Feeling judgment—the scale designed to reflect a person's preference between two contrasting ways of judgment. A person may rely primarily on thinking to decide impersonally on the basis of logical consequences. A person with the feeling judgment preference relies on decision making based on personal or social values.

Judgment/Perception—the scale designed to indicate the process a person uses to deal with the outer world. A person with a judgment preference uses a judgment process (either thinking or feeling) when dealing with the outer world. A person with the perception preference uses the perceptive process (either sensing or intuition) for dealing with the outer world.

According to the theory, by definition, one score or pole of each of the four preferences is preferred over the other poles for each of the 16 types (Myers & McCaulley, 1985). Questions on the instrument relate to the four scales. Each question offer two possible answers which represent the two poles in each scale.

There are a number of MBTI test-retest reliability studies (Carskadon, 1977, 1979, 1982; Harris, 1981; Howes, 1977; Levy, Murphy, & Carlson, 1972; McCarley & Carskadon, 1983; Myers, 1973; Parham, Miller, & Carskadon, 1984; Weiss, 1980) as identified by Myers and McCaulley, (1985, pp.172-173), that have been conducted using

product-moment correlations of continuous scores (Zeisset, 1996). Studies indicate results of test-retest agreements of type categories, in general, and as a function of strength of preference consistent over time were also conducted (Hammer and Huszczo, 1996; Harris, 1981; Howes, 1977; McCarley and Carskadon, 1983; Myers, 1973; Stalcup, 1968; Weiss, 1980).

Much of the MBTI research reported in the *Journal of Psychological Type* relates to criterion validity-looking for the possible predictions one can make about human behavior is based on the theory of type (Zeisset, 1996). For example: (1) Do MBTI continuous scores correlate in the expected directions with other instruments that appear to be tapping the same constructs? (2) Is there evidence that the behavior of the MBTI types is consistent with the behavior predicted by theory? (3) What can knowledge of type differences contribute to understanding other issues of importance to psychology? (Myers & McCauly, 19985). Much is known regarding the psychometric functioning of the MBTI and the standards that are typically applied to trait-based tests. The MBTI generally appears to perform well in terms of reliability and validity (Hammer, 1996 pp. 27).

Population

On-site technical assistance visits were made to 26-selected EIP-trained schools as part of the EIP Quality Assurance/Reflective Team Process. The purpose of the visit was to assist teams in the reflection and refinement of their EIP process and team functioning. As part of this process each team member was administered The Myers-Briggs Type Indicator (MBTI).

Each instrument was scored and analyzed by a trained administrator and results were shared immediately with the participants. Participants were supplied with written information and documentation of their TYPE and with information they could use at a later time.

Form M consists of 93 questions. Participants are asked to answer questions based on individual preferences. The responses are recorded and results calculated as directed by Form M. Results are recorded on a summary form, which categorizes the answers based on the eight interval scales. The Extraversion/Introversion scale has a total of 21 points. Sensing/Intuition has 26, Thinking/Feeling has 24, and Judging/Perceiving has 22. Each scale is analyzed separately. The preference that has the higher score is listed as the preference scale.

Statistical Analysis and Interpretation of Data

The data consisted of 173 individual sets of data; of those 88, or 51%, were successful and 85, or 49%, were unsuccessful teams. These two categories composed the independent variable. The dependent variable consisted of the eight scales of the Myers Briggs Type Indicator (MBTI): Extraversion, Introversion, Sensing, Intuition, Thinking, Feeling, Judging, Perceiving.

Preliminary descriptive statistics were executed on all the data. A total of 173 team members from 22 elementary schools, (Kindergarten to Grade 5), and four middle schools (Grade 6 – 8) were represented in this study. The student population of each school ranged from 181 to 976. These statistical techniques included a measure of central tendency (mean, median, mode), percentages, and measures of variability.

The causal-comparative method includes statistical procedures to test each of the null hypotheses. Each of the items in the MBTI will be tested for significance through Chi Square analysis. The probability level for rejecting the null hypothesis was set at $p < .05$.

Data was analyzed statistically by including Independent Sample t-tests to the .05 level of significance. As a follow up procedure to each of the 93 items on the MBTI, Chi Square analyses was conducted. These were tested at the probability level of .05.

CHAPTER IV

RESULTS

Overview

The purpose of this study was to compare two groups of trained Early Intervention Project (EIP) team members to determine if personality-type preferences impacted the success of these school-based teams and the application of skills and competencies that are part of the EIP training. To test this null hypothesis, a total of 173 team members representing 26 EIP teams were studied. The 26 schools were identified as schools trained in the Connecticut Early Intervention Project. This ex-post-facto study identified successful and non-successful EIP teams, based on special-education prevalence rates. Special-education prevalence for each school is a percentage of the school-age population with disabilities that are receiving special education. The information is obtained from a database of students with disabilities who receive special education compiled by the Connecticut State Department of Education.

The purpose of the EIP team is to provide support to the teacher and recommend strategies and intervention for students experiencing difficulties in the classroom. If the strategies and interventions do not work, the team can make a referral to special education.

For purposes of this study, schools that had 12% or less of their student population identified as special education were classified as *successful* EIP schools. Schools that had more than 12% of their student population identified as special education were classified as *non-successful* EIP schools.

The following primary null hypotheses was tested:

There is no difference in the personality type preference of successful EIP team members versus unsuccessful EIP team members.

The four null sub-hypotheses were tested:

1. There is no difference in the Extraversion/Introversion characteristics of successful EIP team members versus unsuccessful EIP team members;
2. There is no difference in the Sensing Perception/Intuition Perception characteristics of the successful EIP team members versus unsuccessful EIP team members;
3. There is no difference in the Thinking/Feeling Judgment characteristics of the successful EIP team member versus unsuccessful EIP team member;
4. There is no difference in the Judgment/Perception characteristics of the successful EIP team member versus unsuccessful EIP team member.

Null Hypothesis # 1

There is no difference in the personality type preference of successful EIP team members versus unsuccessful EIP team members.

The first preliminary step in analyzing the data was to determine if there was a statistical basis on which to decide if the null hypothesis could be rejected. A test for independent means was conducted to determine the level of statistical significance of the

observed difference between the sample means of the teams identified as successful and teams identified as unsuccessful based on the special-education prevalence rates. The mean score of each group was determined based on the eight MBTI scales of the MBTI Type Indicator Form M.(See Table 1.)

Table 1

Mean Scores of the Myers Briggs Type Indicator (MBTI) Between Successful EIP Teams and Non-successful EIP Teams

MBTI Scales	<i>Successful</i>			<i>Non-successful</i>		
	Mean	N	SD	Mean	N	SD
Extraversion	13.17	84	5.8	11.65	81	5.7
Sensing	12.51	85	7.0	11.49	79	7.3
Thinking	7.43	83	4.9	7.68	82	5.6
Judging	13.40	85	6.6	12.26	81	6.2
Introversion	9.06	79	5.8	9.65	82	5.9
Intuition	13.80	87	7.1	15.12	82	7.5
Feeling	16.77	87	5.0	16.33	83	5.6
Perceiving	9.19	81	6.5	10.66	77	6.0

Table 1 represents data for both groups based on the eight interval scales of the Myers Briggs Type Indicator (MBTI), which represents various aspects of an individual's personality preferences.

Table 2 represents the differences in sample means is based on the significance level of $p < .05$. The results of this data show that the mean between both groups based on the eight interval scales of the Myers Briggs Type Indicator (MBTI) is not statistically significant. Therefore, the null hypothesis - There is no difference in the personality-type preference of successful EIP team members versus unsuccessful EIP team members – is accepted.

Table 2

Mean Scores and Significance Values of the Myers Briggs Type Indicator (MBTI) Between Successful EIP Teams and Non-successful EIP Teams

MBTI Scales	Successful Mean	Non-successful Mean	t value	df	Prob. Value
Extroversion	13.17	11.65	1.69	163	.09NS
Sensing	12.51	11.49	.92	162	.36NS
Thinking	7.43	7.68	.30	163	.76NS
Judging	13.40	12.26	1.14	164	.25NS
Introversion	9.06	9.65	.63	159	.53NS
Intuition	13.80	15.12	1.17	167	.24NS
Feeling	16.77	16.33	.53	168	.60NS
Perceiving	9.19	10.66	1.49	156	.14NS

NS = not statistically significant

Null Hypothesis #2

There is no difference in the Extraversion/Introversion characteristics of successful EIP team members versus unsuccessful EIP team members.

The Extraversion/Introversion of the Myers Briggs Type Indicator are bi-polar scales and represent the attitudes and orientations towards life based on personality preferences.(See Table 3)

Table 3

Mean Scores and Significance Values of the Extraversion and Introversion Scales of the Myers Briggs Type Indicator (MBTI) Between Successful EIP Teams and Non-successful EIP Teams

MBTI Scales	<i>Successful</i>			<i>Non-successful</i>			t value	df	Prob. Value
	Mean	N	SD	Mean	N	SD			
Extraversion	13.17	84	5.8	11.56	81	5.7	1.69	163	.09NS
Introversion	9.06	79	5.8	9.65	82	5.9	.63	159	.53NS

NS – not statistically significant

As shown in Table 3, the results of this data show that the mean between both groups based on the Extraversion and Introversion interval scales of the Myers Briggs Type Indicator (MBTI) is not statistically significant. Therefore the null hypothesis is accepted: There is no difference in the Extraversion/Introversion characteristics of successful EIP team members versus unsuccessful EIP team members.

Null Hypothesis #3

There is no difference in the Sensing Perception/Intuition Perception characteristics of the successful EIP team members versus unsuccessful EIP team members.

The Sensing Perception/Intuition Perception scales of the Myers Briggs Type Indicator (MBTI) are bi-polar scales and represent how an individual prefers to take in information and learn a new task.(See Table 4.)

Table 4

Mean Scores and Significance Values of the Sensing and Intuition Scales of the Myers Briggs Type Indicator (MBTI) Between Successful EIP Teams and Non-successful EIP Teams

MBTI Scales	<i>Successful</i>			<i>Non-successful</i>			t value	df	Prob. Value
	Mean	N	SD	Mean	N	SD			
Sensing	12.51	85	7.0	11.49	79	7.3	.92	162	.36NS
Intuition	13.80	87	7.1	15.12	82	7.5	1.17	167	.24NS

NS = not statistically significant

As shown in Table 4, the results of this data show that the mean between both groups based on the Sensing and Intuition interval scales of the Myers Briggs Type Indicator (MBTI) is not statistically significant. Therefore, the null hypothesis is accepted: there is no difference in the Sensing/Intuition characteristics of successful EIP team members versus unsuccessful EIP team members.

Null Hypothesis #4

There is no difference in the Thinking/ Feeling Judgment characteristics of the successful EIP team member versus unsuccessful EIP team member.

The Thinking/Feeling Judgment scales of the Myers Briggs Type Indicator (MBTI) are bi-polar scales and represent how an individual prefers to make decisions.(See Table 5.)

Table 5

Mean Scores and Significance Values of the Thinking and Feeling Scales of the Myers Briggs Type Indicator (MBTI) Between Successful EIP Teams and Non-successful EIP Teams

MBTI Scales	<i>Successful</i>			<i>Non-successful</i>			t value	df	Prob. Value
	Mean	N	SD	Mean	N	SD			
Thinking	7.43	83	4.9	7.68	82	5.6	.30	163	.76NS
Feeling	16.77	87	5.0	16.33	83	5.6	.53	168	.60NS

NS = not statistically significant

As shown in Table 5, the results of this data show that the mean between both groups based on the Thinking and Feeling interval scales of the Myers Briggs Type Indicator (MBTI) is not statistically significant. Therefore the null hypothesis is accepted: There is no difference in the Thinking/Feeling characteristics of successful EIP team members versus unsuccessful EIP team members.

Null Hypothesis #5

There is no difference in the Judgment/Perception characteristics of the successful EIP team member versus unsuccessful EIP team member. The Judgment/Perception scales of the Myers Briggs Type Indicator (MBTI) are bi-polar scales and represent how an individual prefers to orient him or herself to the outer world.(See Table 6.)

Table 6

Mean Scores and Significance Values of the Judging and Perceiving Scales of the Myers Briggs Type Indicator (MBTI) Between Successful EIP Teams and Non-successful EIP Teams

MBTI Scales	<i>Successful</i>			<i>Non-successful</i>			t value	df	Prob. Value
	Mean	N	SD	Mean	N	SD			
Judging	13.40	85	6.6	12.26	81	6.2	1.14	164	.25NS
Perceiving	9.19	81	6.5	10.66	77	6.0	1.49	156	.14NS

NS = not statistically significant

As shown in Table 6, the results of this data show that the mean between both groups based on the Judging and Perceiving interval scales of the Myers Briggs Type Indicator (MBTI) is not statistically significant. Therefore, the null hypothesis is accepted: there is no difference in the Judging and Perceiving characteristics of successful EIP team members versus unsuccessful EIP team members.

Additional Findings

The Myers-Briggs Type Indicator Form M consists of 93 questions. Each question has two options. Each is connected to characteristics of a personality preference for one of the eight interval scales: Extraversion, Introversion, Sensing, Intuition, Thinking, Feeling, Judging, and Perceiving. In the scoring process, the questions connected to the bi-polar scales (e.g.: Extraversion/Introversion, Sensing/Intuition, Thinking/Feeling, and Judging/Perceiving) are grouped together to give the personality preferences of the individual.

As part of this study, the responses of each of the questions were analyzed to determine significant differences between the two groups successful and unsuccessful EIP teams. A Chi-Square test was performed to compare the frequency of the two groups. Of the 93 questions, five showed statistically significant differences between the two groups.(See Table 7.)

Table 7

Items on the MBTI that Showed Significance Between Successful EIP Teams and Non-successful EIP Teams Based on the Chi Square Analysis

ITEM	<i>Successful</i>		<i>Non-successful</i>		Chi Square	df	Prob. Level
4	Good Mixer (70%)	Quiet (30%)	Good Mixer (55%)	Quiet (45%)	4.30	1	.03*
12	Private (32%)	Open (68%)	Private (51%)	Open (49%)	6.29	1	.01*
23	Mingle (80%)	Keep (20%)	Mingle (66%)	Keep (34%)	4.08	1	.04*
25	Emergency (30%)	Plan (70%)	Emergency (52%)	Plan (48%)	8.86	1	.00**
32	Facts (36%)	Ideas (64%)	Facts (21%)	Ideas (79%)	4.85	1	.03*

*p<.05. **p<.01.

Items 4, 12, and 23 are connected to the Extraversion (E)/Introversion (I) scales of the MBTI; Item 32 is connected to the Sensing (S)/Intuition (N) scales of the MBTI, and Item 25 is connected to the Judging (J) /Perceiving (P) scales of the MBTI. To analyze this further, Table 8 shows the questions that showed significant differences between the two groups. In addition, Table 8 indicates the preference that is connected to the specific

question. The results show that three out of the five questions were indicators towards the Extraversion/Introversion preferences; one question was an indicator for the Sensing/Intuition preferences; and one question was an indicator for the Judging/Perceiving preferences.

Table 8

Items and Specific Questions on the MBTI that Showed Significance Between the Two Groups Based on the Chi Square Analysis

Item	Question	Response 1	Scale	Response 2	Scale
4	Are you usually	a "good mixer"?	E	rather quiet and reserved?	I
12	Would most people say you are	a private person?	I	a very open person?	E
23	Do you usually	mingle well with others?	E	tend to keep more to yourself?	I
25	In your daily work, do you	rather enjoy an emergency that makes you work against time?	P	usually plan your work so you won't need to work under pressure?	J
32	Which word appeals to you more?	Facts	S	Ideas	N

Further analysis of the data provided a comprehensive picture of the type preferences of EIP trained schools. Table 9 indicates the Type Preferences for EIP-trained teams.

Table 9

Total Mean Scores of the Myers Briggs Type Indicator (MBTI)

MBTI Scales	Successful Mean	SD	Non-successful Mean	SD	Total Mean	SD
Extraversion	13.17	5.8	11.65	5.7	12.42	5.7
Introversion	9.06	5.8	9.65	5.9	9.36	5.9
Sensing	12.51	7.0	11.49	7.3	12.02	7.1
Intuition	13.80	7.1	15.12	7.5	14.44	7.3
Thinking	7.43	4.9	7.68	5.6	7.56	5.2
Feeling	16.77	5.0	16.33	5.6	16.56	5.3
Judging	13.40	6.6	12.26	6.2	12.84	6.4
Perceiving	9.19	6.5	10.66	6.0	9.90	6.3

Type preferences of the total sample indicate the majority of EIP team members show a preference in the following scales: Extraversion (E), Intuition (N), Feeling (F), and Judging (J). The “group” type is ENFJ.

Demographic Information

There are 169 school districts in Connecticut, 645 elementary schools, 163 middle schools, and 163 high schools. Of the total population of schools, 186 schools are defined as EIP-trained schools. The 26 participating schools represented 21 school districts in Connecticut, 22 were elementary schools (Kindergarten to Grade 5), and four were middle schools (Grade 6–8). The student population of each school ranged from 181 to 976 with school-poverty percentages from 2.3 % to 45.8%. A total of 173 team members were part of the database.

Participation and support of a building principal and composition of a team are noted as critical components of successful teams. As part of this study, the following

additional demographic information was analyzed for significance in comparing the two groups, however, there was no significance was found:

1. *Was the building principal trained with the EIP team?* The results showed that 36% of the principals from the successful teams *were* trained with the team as compared to 40% of the principals from the non-successful teams. Sixty-four percent of the building principals from the successful teams were *not* trained with the team as compared to 60% of the principals from the unsuccessful teams. No statistical difference was found.

2. *Did composition of the team or years of experience have any significance?*

The results, as shown in Tables 10 and 11 indicate no statistical significance based on the composition or years of experience in education of the teams.

Table 10

Composition of Successful and Unsuccessful EIP Teams Based on Position of Team Members

Position	Successful	Non-successful
Principal/Administrator	7 (9%)	8(10%)
Teacher/Reading Consultant	46 (58%)	49(59%)
Special Educator	8 (10%)	8(10%)
Pupil Personnel	18 (23%)	18 (22%)
Responses left blank = 9		

Table 11

Central Measure of Tendency of Successful and Non-successful EIP Teams Based on Years of Experience of Team Members

Years in Profession	<i>Successful</i>	<i>Non-successful</i>
Mean	15	16
Median	15	16
Mode	5	1
Missing data = 30ss		

3. *Did poverty have an impact when comparing successful and unsuccessful EIP teams?* Poverty rates were identified for all 26 participating schools to determine if poverty had an impact when comparing successful and unsuccessful EIP teams. Measures of Central Tendency were presented to describe the average of an entire set of scores for the poverty rates of the 26 participating schools.

Table 12

Measures of Central Tendency of the Poverty Rate of Participating EIP Teams Comparing the Successful and Non-successful Teams

Poverty Rate	<i>Successful</i>	<i>Non-successful</i>
Mean	12%	24%
Median	6%	21%
Mode	2%	41%

The results indicate that this demographic aspect of the study showed statistically significant differences between the poverty rate of successful and unsuccessful EIP teams. Although the poverty rates were not part of the overall research focus, the dimension was added in this analysis as a component of the demographic data.

CHAPTER V

DISCUSSION

Overview

This study was designed to enhance understanding of the impact that personality-type preferences have on the effectiveness of school-based, problem-solving teams designed to support teachers working with students who are experiencing difficulties in the general-education classroom. Educators today are faced with a changing and diverse population, greater pressures regarding accountability, and changing curriculum mandates. School-reform movements are calling for the establishment of more collaborative structures to allow teachers to support each other and the students they serve. Schools are facing difficult challenges to ensure the success of students and provide adequate support to teachers.

School-based teams exist in a variety of forms within schools, (1) grade-level teams in elementary and middle schools, (2) interdisciplinary or departmental teams at high school, (3) special education teams, and (4) various other fluid teams charged with school-improvement plans, curriculum issues, or new initiatives.

Educators are expected to work together and collaborate, but few educators are trained or prepared to work on teams. As budgets become tighter and accountability increases, the pressure for educators increases. There is recognition that teachers cannot do this alone (Fullan, 1993).

Effective teaming, like any relationship, takes time and effort to develop (Dickinson & Erb, 1997; Erb & Doda, 1989; Merenbloom, 1991; Rottier, 1996; Schamber, 1999; Schurr, Thomason, & Thompson, 1995). The power of a “team” working together to achieve a mutual goal and solve complex problems can be a catalyst for change in any given organization (Gardner & Korth, 1998).

Significant Findings of This Study

The overall purpose of this study was to determine if personality-type preferences impact the success of Early Intervention Project (EIP) teams. Five null hypothesis were set forth:

1. There is no difference in the personality-type preference of successful EIP team members versus non-successful EIP team members.
2. There is no difference in the Extraversion/Introversion characteristics of successful EIP team members versus non-successful EIP team members.
3. There is no difference in the Sensing Perception/Intuition Perception characteristics of the successful EIP team members versus non-successful EIP team members.
4. There is no difference in the Thinking/Feeling Judgment characteristics of the successful EIP team member versus non-successful EIP team member.
5. There is no difference in the Judgment/Perception characteristic of the successful EIP team member versus non-successful EIP team member.

As a result of the analysis, all null hypotheses for all statements were accepted. The conclusion is that, on the basis of this study at least, there is no difference in personality-type preferences when comparing successful EIP teams and non-successful

EIP teams. For purposes of this study, success was determined based on the special-education prevalence percentages of the participating school. Special-education prevalence rates are compiled and published by the Connecticut State Department of Education. Schools that had 12% or less of their student population identified as special education were classified as *successful* EIP schools. Schools that had more than 12% of their student population identified as special education were classified as *non-successful* EIP schools.

EIP schools have received extensive professional development funded by the Connecticut State Department of Education. The training and support included on-going technical assistance with a focused on such competencies and skills as (1) collaboration and teaming and (2) a systematic problem-solving process with a focus on identifying clear objectives, collecting curriculum-based assessments, and developing appropriate action plans with a monitoring system to determine student success.

Unanticipated Outcomes : Support for Diversity

This study was conducted with the belief that personality preferences as defined by the MBTI would be different among successful and non-successful EIP teams. The results confirm that team members need not necessarily be similar and that in teaming, diversity can be a strength as it may bring different perspectives to the team discussion and practices (Schamber, 1999). This study demonstrated that personality preference may not be a factor in determining whether or not a team will be successful. It may be more important for teams to have members who have complementary skills needed to do their jobs such as (1) technical and functional skills; and (2) problem-solving and interpersonal skills (Katzenbach & Smith, 1993). The study, therefore, supports the value

of diversity and the need to celebrate and understand how to best tap into the strengths that individuals bring to the group process. Teams that have members from different backgrounds and with diverse personalities are potentially better equipped to solve problems (Huszczo, 1996). This study confirms that the team members on both successful and non-successful teams were equivalent in terms of their personality preferences and type. However, knowing about personality preferences and type is an advantage when people accept differences and look forward to gaining the different perspectives. Most people spend little time figuring out their own personality preferences as well as the preferences of their team members (Huszczo, 1996). Relationships do not just happen; they require work and commitment. Teaming and cooperative learning environments benefit everyone. It requires people to communicate and understand each other. The brain develops better in concert with others, so one ought to orchestrate learning environments that use teams to maximize learning and performance (Jensen, 1998)

The intent of this research is not to imply that only certain personality types should work together, it is the knowledge of personality preferences, as indicated by the MBTI, that can help to provide individuals with information to effectively interact and communicate with each other. High-performing teams are extremely rare (Katzenbach & Smith, 1993), in part because of the degree of personal commitment and understanding of one another. Educators cannot afford to waste energy and time; thus teaming can be an effective way to problem-solve and work to meet the diverse learning needs of individual students to produce successful outcomes for all students.

Unanticipated Outcome:
TYPE Preference of EIP Teams

The results of this study did not show differences in personality type among the successful EIP teams versus the non-successful EIP teams. However, the analysis did indicated that when looking at both groups, successful and non-successful EIP teams, the predominant “group” TYPE preference was Extraversion, Intuition, Feeling, and Judging, a letter combination of ENFJ. This information could be significant in understanding how the preferences of EIP team members are conducive with the skills and competencies that are part of a team process such as the EIP process.

A preference for Extraversion (E) supports the concept of working in teams and collaborating with others. A person with this preference enjoys getting his or her energy from people, activities, and/or things. These individuals would prefer to work and brainstorm with groups of people and function best doing so.

Individuals with a preference of Intuition (N) tend to approach a task or a new initiative looking first at the big pictures. These individuals do not necessarily get hung up on the details. These are the individuals that tend to “think out of the box.” These individuals see the possibilities and look at the possible connections. In connection with this study, the group preference was Intuition. This preference supports the idea that anything is possible for students experiencing difficulties. Educators need to be more open as to what possibilities are available rather than looking at one approach (i.e., special education) as the only answer. Individuals with this preference are more likely to try a new initiative or approach to meet a need.

Individuals with a preference of *Feeling (F)* when making a decision in a team process tend to make decisions that favor keeping harmony in the group. Thus, they make decisions based on values, personal feelings, and will be concerned about the impact on people. As a profession, educators tend to have a preference for *Feeling (F)* when making decisions. In the analysis of the research base for this study, the research showed that many teams of this nature reported being satisfied with the team process. However, a few studies produced objective data regarding student progress. This “*feel good*” about the process could be a result of the majority of individuals participating in and using teams to help problem solving around the needs of students reporting a preference of “Feeling” with regards to their decision making. This type of individual would first consider how he or she feels internally and would make decisions and conclusions based on how he or she was treated by others and wouldn’t necessary determine effectiveness of a process by looking at the objective data first.

Individuals with a preference towards *Judging* when dealing with the outside world tend to prefer organization, completion of tasks, schedules, and plans. This preference works to help individuals who are implementing a team process such as the process identified as part of the Early Intervention Project. The team is trained to work through a systematic process to problem solve around the needs of students and to develop a specific objective or action plan and then to monitor progress of the student. A person with a preference of Judging on this scale welcomes the systematic process and its structure with regard to the support of students.

The MBTI has a total of eight personality preferences that all people use at different times. Extraversion (E), Introversion (I), Sensing (S), Intuition (N), Thinking

(T), Feeling (F), Judging (J), and Perceiving (P). These eight preferences are organized into the four bi-polar scales: Extraversion/Introversion (E/I), Sensing/Intuition (S/N), Thinking/Feeling (T/F), Judging/Perceiving (J/P). Upon completion of the self-scoring instrument an individual is given a TYPE preference consisting of four letters one from each of the scales. There are sixteen possible TYPE preferences.

Additional findings in the study surfaced after a Chi-Square test was performed to compare the frequency of the two groups based on the 93 questions that were part of the MBTI. Of the 93 questions, five showed statistically significant differences between the two groups. Three of the questions related specifically to the Extraversion/Introversion (E/I) scale; one question related to the Sensing/Intuition (S/N) scale; and one question related to the Judging/Perceiving (J/P) scale.

The three MBTI scales affected by these results are clearly connected to the skills and competencies used in teaming. Communication, collaboration, and effective problem solving are essential components of an effective team process. For example, the E/I scale is where people focus their energy. Those with the Extraversion preference prefer people and need the dialogue and conversation to get energized. Individuals with a preference toward Introversion prefer drawing energy from within themselves and may not perform to the best of their ability in groups.

Implications of This Study

The knowledge gained from this study will contribute to our knowledge about team effectiveness by (1) enhancing professional development within schools, (2) increasing the knowledge base for building administrators to help create high- performing

teams, and (3) assessing the impact of initiatives, such as the Connecticut Early Intervention Project, on school-based teams.

This information will assist in creating more productive, efficient, and effective teams that will result in reduced costs in training and in staff time. The effectiveness positively affects student achievement. "Perhaps the most impressive outcome of instructional support is the fact that students achievement has improved" (Tucker, 2001 p. 57).

The population of this study, Connecticut Early Intervention (EIP) teams, received intensive training and technical assistance regarding collaboration and team effectiveness. The analysis of personality preferences of this population provides pertinent information that assists in determining if, (1) the training and technical assistance contributes to the functioning of the teams, and (2) personality preference affects group dynamics and team effectiveness.

Summary

As education continues to accommodate an increasingly diverse group of students by using innovative instructional practices, school-based intervention teams will play a viable role in accomplishing this (Bahr, Whitten, Dieker, Kocarek, & Manson, 1999). This study set out to determine if there were significant differences in personality preferences of successful EIP teams versus non-successful EIP teams. The null hypotheses were accepted and the study did not show a difference between the two groups. However, an analysis of the data provides critical information regarding the personality preferences of educators that are drawn to a collaborative-team process.-a

process that promotes a framework for teams to problem-solve effectively to meet the needs of students experiencing difficulties in the classroom.

There is a need for more *collaborative* structures within schools and training for teachers to work effectively in a team structure. Schools as they are presently constituted do not represent learning organizations (Senge, 1990) in which interprofessional collaboration creates an atmosphere in which students can succeed (Kovaleski, Gickling, Morrow, & Swank, 1999). Once teams have established professional and interactive relationships, they must learn how to best use their group efforts to achieve their goals. Few educators are trained or prepared to do this (Flowers, Mertens, & Mulhall, 2000). Professional development activities that include information about personality preferences can help to build the skills teachers need to effectively work together. Schools engaged in interdisciplinary teaming have a more positive school climate, increased contact with students and parents, higher job satisfaction, and increased student performance (Flowers, Mertens, & Mulhall, 2000). The second wave of the restructuring movement has concentrated not just on redesigning curriculum and instruction but by realigning roles and relationships to unleash teachers' energy and influences and enhance the professional cooperation and support to each other (Evans, 1996, p. 229). Effective teams need to have constructive interpersonal relationships to communicate effectively, to problem solve, and to make decisions, and to resolve conflicts. This study adds new information to the research about which personality preferences enhance a SBPSTs.

Teams need to be **effective** when they meet and to use time efficiently. In the Kovaleski, Gickling, Morrow, and Swank (1999) study, schools that demonstrated high

levels of implementation had the following characteristics: basic collaborative team structures (broad members, group norms and procedures, interpersonal communication skills, effective meeting logistics), principal leadership, extensive ongoing data collection to inform decision making, and the involvement of a support teacher. More than 50% of middle schools in the U.S. have incorporated teaming as an organizational structure for their school (Valentine & Whitaker, 1997). As budgets become tighter, it will be imperative to demonstrate that this strategy for deploying teachers is having a positive effect on student achievement (Rottier, 2000). Educators must ensure that the time taken to meet as a group is efficient and effective. Teachers must be trained to understand how the team can improve its capacity for making decisions, problem solving, managing conflict, and reaching the talents of all individuals so that the power of collaboration can be realized. A team is more than a bunch of people appointed to do a job together. A SBPST is different from the usual committee or task force, which may resemble a team. However, this type of team is not bound together as usual teams are. A team that has the benefit of special preparation for its appointed responsibilities is supposed to be prepared to take the lead in influencing the larger school community (Maeroff, 1993). Teaming puts teachers together in a professional relationship, which is unlike any other relationship in the field of education. Teams could benefit from understanding personality preferences and how these preferences affect the team both positively and negatively.

In an effort to address the need for restructuring in both general and special education, a number of authors (e.g., Reschly, 1988; Rosenfield, & Gravois, 1996; Will, 1986) have called for the institutionalization of school-based teams that would address a

student's needs prior to referral for evaluation for special education. As the knowledge base on effective team practices grow, the onus is on special and general education to train educators on effective instructional practices (Bahr, Whitten, Dieker, Kocarek, & Mason, 1999). The results of this study suggests the fact that state policy and appropriate training funds support and advance the efforts of improving the effectiveness of school-based intervention teams to address the needs of all students.

Future Research

Impact of Poverty

Given the results of the demographic findings related to the poverty rate of successful and unsuccessful teams, future research could include a study on how poverty affects EIP schools. The mean poverty rate of successful schools in this study was 12% as compared to 24% of unsuccessful schools; the median percentage was 6% of successful schools as compared to 21% of non-successful school; and the mode was 2% of successful schools as compared to 41% of non-successful schools.

Quality of Strategies

This study did not consider the quality of strategies recommended by the EIP team. The success of the strategy depends largely on the appropriateness of the plan and the degree to which the strategy was implemented (Kirner, 2000; Gresham, 1989; Gresham, Gansle, Noell, Cohen,& Rosenblum,(1993). In the study conducted by Kirner, (2000), she noted that future study on treatment integrity could be done. One finding of this current study was that when looking at group preferences for an EIP team, the predominant function of the group was determined as Intuition/Feeling (NF). The preferences for this type would be to evaluate outcomes in a more subjective fashion

relying on “gut” feelings. The opposite preference would be the Sensing/Thinking (SF) function which would tend to look at data and more objective information in order to monitor and evaluate progress.

Student Achievement

Clearly, continued research is necessary to determine the extent to which SBPSTs have affected student behavior and/or performance (Welch, Brownell, & Sheridan, 1999). While this study did not address student achievement, continued research is necessary to determine the extent to which school-based, problem-solving teams (SBPSTs) are effective in facilitating meaningful change in student behavior and performance (Welch, Brownell, & Sheridan, 1999).

In conclusion, if one knows that an effective team needs to have constructive interpersonal relationships to communicate effectively to problem solve, make decisions, and to resolve conflict, then understanding, appreciating, and acknowledging the personality preferences of team members with help to create a high performing and effective team.

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